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INDIA RUBBER WORLD

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GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

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NOVEMBER 1, 1901.

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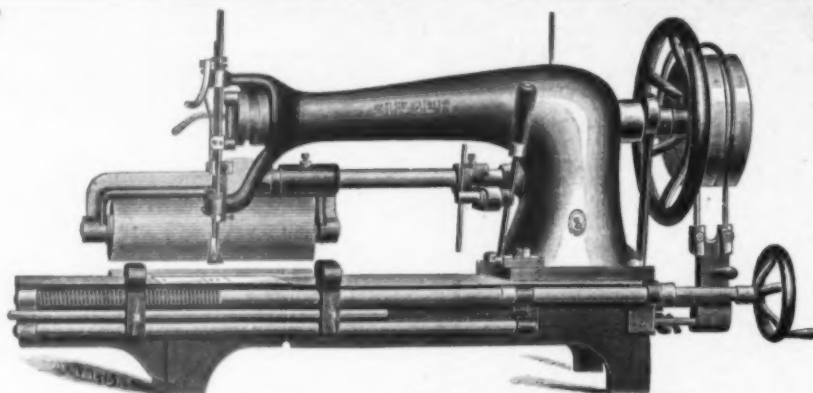
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ANOTHER "RUBBER TRUST"?

THE newspapers have harvested the periodical crop of rumors, which may have no more foundation in fact than usual, regarding the prospect for another combination in the rubber industry. Though considerable space has been devoted of late to such rumors, they are mostly too vague to justify repetition in our news columns, and we are content to leave them for consumption outside the rubber trade. One of these reports, by the way, is disposed of in a newspaper published in an important rubber manufacturing center, under the head line, "A Hot Air Story." Whatever this phrase may mean, it is evident that the journal in question has been inspired by the local members of the trade with a large degree of skepticism in the matter of a more comprehensive "rubber trust" than has yet taken shape.

It would be a safe assumption that any rubber factory in the country could be bought, provided the price were made sufficiently attractive to the present owners. But payment would have to be made in cash, or at least in paper more readily negotiable than the general run of industrial securities nowadays. In brief, the rubber industry is in a good condition to-day, and the successful owner of a factory, if called upon to sell, would probably ask more for the business than he could expect to make from it by continuing in charge. It would not be enough to take a big price on paper, to be realized only in the event of the combination proving a success from the dividend paying standpoint.

Industrial consolidation, as effected nowadays, calls for the aid of bankers, who take blocks of shares as security for the money of their customers or depositors. It happens at this time that the prevailing quotations for industrial securities are so low as to discourage investments of this class, no matter what the particular industry may happen to be. But so far as the rubber trade is concerned, the whole subject has been threshed over and over again, and it is not probable that a single manufacturer has become more favorably inclined toward going into a "combine" as a result of what has been done in consolidating the rubber industry in the past. At any rate, any talk about a new "rubber trust" could be considered more seriously if it came from leaders in the trade, instead of being confined to anonymous sources, whence the newspapers are as likely as not—or even more likely—to bring up a fine catch of misinformation as often as they go fishing.

ARE TIMES SO BAD IN BRAZIL?

IT may seem strange that so little can be learned about the affairs of a country so important as Brazil, and in which civilized government has so long existed. But government "by the people" exists there as yet only in theory, and real information regarding the administration is little diffused. As regards business conditions, the man is fortunate who knows the state even of his own affairs. In a country so vast, and with limited means of inter-com-

munication, the different states have little relation one to the other. It is, however, only the rubber districts with which we now have any concern.

It is common report that the monetary system of Brazil is sadly unstable; that coffee growing has become less profitable; and that rubber "farms" are being offered for a song. Moreover, bankers have been forced to limit credits to the owners of rubber properties, and merchants to make smaller advances of goods. The fact that fewer laborers, fewer steamers, and fewer supplies have gone up the Amazon this year would seem, of necessity, to mean that somewhere less rubber must be produced.

But our own United States have not always enjoyed uninterrupted prosperity. There have been years of short crops, scarcity of money and the like, but followed always by recovery and subsequent progress. The same thing is possible in Brazil. Recent official reports from the federal capital give a more favorable color to conditions with which the government has to deal; the population of the country remains and presumably does not stop work because times are "bad." And when improvement does come, the news may not fly abroad as fast as the reports of depression have done.

What has this to do with rubber? All that can be said is that the production has not fallen off. Last year's crop was the largest on record, in spite of the predicted shortage. And now some of our correspondents are of the opinion that, while there may be a shortage in the Upriver supplies this season, it will be made good from the Islands districts. This view does not appear to us to be without reason. For years rubber workers have been flocking up the Amazon in search of fresh and more productive trees, while the long worked *estradas* nearer Pará have been neglected or left to the less efficient or less enterprising class of labor. As a result, the production of Islands rubber perhaps has not been kept up to its capacity.

If, however, conditions have proved unfavorable to work in the remoter districts, it would only be natural for an increased force of capable workers to find employment nearer the bases of supplies of money and food, sending to market more rubber than usual from the Islands district. At any rate, no definite indication exists as yet that the world will not have its usual supply of "Pará rubber" this year, though of all things known to commerce this is about the unsafest on which to risk one's reputation as a prophet.

ANOTHER RUBBER BELT IN AFRICA.

THE collection of India-rubber in the French Soudan, referred to elsewhere in this paper, points to the probable existence in Africa of another rubber belt, equal in importance to that of which the Congo river is now the outlet. If this should prove true the effect will be to prolong the supplies of native rubber, though ultimately it is to be feared that the new fields will become exhausted, as others have been, for the reasons set forth in an illustrated article in THE INDIA RUBBER WORLD last month.

The matter for present interest, however, is the fact

that some virgin rubber fields yet remain to be worked. The French colony of Senegal is already a producer of rubber, from the region near the seaboard. The French Soudan is an area further inland, which has been brought under the administration of this colony. Beyond this are regions, claimed by various European powers, and not yet brought under civilized control, and in which rubber of value doubtless will be found to exist. Finally, to the eastward, lies the British sphere of influence, including Uganda, where rubber is known to abound, and where its exploitation is only a matter of time. Thus is indicated a belt across Africa, from ocean to ocean, north of the Congo region, the forests of which, no less than those of the Congo, are the home of rubber.

True, much of this vast region lacks such a favorable outlet as the Congo river affords. Yet nature has done much in this direction, which man is attempting to supplement. French Soudan rubber now comes down the Senegal river; as the search for rubber progresses further eastward, the headwaters of the great Niger river will be reached. The northern affluents of the Congo will become available for parts of this new rubber belt, and the Uganda railway, reaching to the East African coast, and the river Nile will afford outlets for certain rubber.

The late Emin Pasha sent samples of rubber from the eastern Soudan, down the river Nile, to the factory of the Messrs. Pirelli, at Milan, and he entertained a hope of developing an important trade based upon the rubber resources of a region which is only now being brought under other than native control. To recur to the favorable advantages for shipping Congo rubber, it is generally believed that the profits of trading in Belgian Africa have been very great, and doubtless it will be possible to exploit rubber at a profit in regions where the cost of transportation will be greater than by the Congo river and railway. Especially will this be true after the cream of the Congo rubber supply has become exhausted.

STRIKES AND THE RUBBER INDUSTRY.

A REPORT has appeared on the cost of the recent strike in a rubber factory at Harburg, Germany, the history of which movement has been detailed already in this journal. But the cost as stated is only that portion which fell upon the "social-democratic clubs," who, more than the rubber workers, were responsible for the unsuccessful demonstration made by the latter. If there should be added the loss of wages, not only during the strike, but, in some cases, permanent loss of position, the total would be found to exceed greatly the item of about \$25,000 which the clubs had to make good. It is thought that another strike in the German rubber industry will not be attempted soon, in view of the failure of the one at Harburg, which, by the way, was the first in that country for very many years.

Not only in Germany, but in Great Britain and in America as well, the rubber industry has been singularly free from strikes or other labor troubles. There has never been, in fact, in any country, anything like a general shut-

ting down of rubber mills on account of differences between employers and employes, and as time advances the probability of such an occurrence becomes more remote. This latter suggestion is ventured here for the reason that the tendency of wage-earners in general to resort to strikes is apparently becoming less marked. The "leaders" of the labor unions have not the same strong hold upon their followers as has been exhibited in times past, and it must be admitted that, oftener than otherwise, the initiative in strikes has been taken by the "leaders" rather than by the rank and file of the workers. The failure of the great steel workers' organization in this country to rally in force to the call to strike, a few months ago, foreshadows what may be expected generally under like circumstances in future.

It may be of interest to consider why strikes have not occurred more frequently in rubber factories in the past. One reason may be found in the comparative segregation of the rubber workers. While their number in the United States is large, in the aggregate, they are scattered among about 200 factories, in more than a dozen states, while the nature of the industry is so diversified as to render impossible any such universal wage scale as operates as a bond of union among the steel workers, for example. The length of the working day, the amount of work to be accomplished in a day, the rate of wage, and all other such details may vary widely among the different factories, and in the same factory at different seasons. There have not been more strikes in rubber mills, therefore, because the workers have been less thoroughly organized in unions than in some other industries.

But there are other considerations. The largest rubber factories in the country, as a rule, each had a small beginning, often with the owner working side by side with his employes at first, and as the factory grew, there remained a community of interest throughout the establishment which permitted any grievance, real or fancied, to be discussed freely, without the necessity of stopping work and wages in order to force a settlement. It may further be noted that rubber work calls for a higher standard of intelligence than some other branches of industry, one evidence of which is found in a relatively high rate of wages, and this fact doubtless has discouraged a resort to strikes in rubber factories as a means of arriving at an understanding with employers.

RUBBER SHOES MADE BY MACHINERY.

THE manufacture of rubber shoes as it is carried on to-day consists of a series of processes in which there is a maximum of hand labor and a minimum of labor saving machinery. In this particular it stands almost alone among great industries. From its inception, some fifty years ago, there have been modifications of compounds, and minor machines for special parts of the work, but no radical departure from the first idea of engraved rolls, a cumbersome cutting room, many separate shoe parts, booking, cementing, and building up by hand, wooden

lasts, varnishing, and the long slow cure in the dry heater. To bring the business down to the basis that other lines of rubber manufacture have reached, calls for the elimination of the more costly of the processes above mentioned, and the production of goods that are better in respect to appearance, wear, and cost. A careful examination of the new processes and product, which are referred to elsewhere in this issue, with the completest liberty to question or disprove any claim, leads the Editor of THE INDIA RUBBER WORLD to state unreservedly that an absolute revolution in the manufacture of rubber footwear of all kinds is now at hand. In its originality, completeness, and simplicity, the new process seems absolute finality.

THE DEATH OF CHARLES L. JOHNSON, general manager of the United States Rubber Co., has brought out expressions of sorrow and sympathy from the rubber trade at large, as the death of few men connected with it would do. Leaving out the rare business ability, which it is acknowledged he possessed in fullest measure, the impress that his considerate and gentlemanly deportment made upon all those with whom he came in contact is a most delightful recollection. The narrow proverb that "There is no friendship in business" falls very flat in reviewing such a personality; nor is the reason for Mr. Johnson's wide circle of friends far to seek. He met the whole world in a genuinely friendly manner, with the broadest charity toward human failings, receiving in return general respect and affection.

THE FIRST AUTHENTIC INFORMATION regarding Gutta-percha in the Philippines appears this month in a letter from a correspondent of THE INDIA RUBBER WORLD in an island which, during the first months of this year, exported to Borneo over 400,000 pounds of gum which was designed to be worked over on the latter island and put on the market as Gutta-percha. While the nature of this gum remains to be estimated by experts, the price obtained for the material is evidence that it has practical value. By this time the forestry laws enacted by the American administration in the Philippines have been put in force, with the double result that the wasting of the gutta trees will be checked, and a revenue will be derived from the exploitation of the gum.

OUR ABLE CONTEMPORARY, the Cincinnati *Post*, deserves a large rubber medal for having unearthed a surprising piece of information, which it very properly makes prominent, instead of keeping it a secret. It appeared in the issue of that paper for October 2, and is as follows, including headlines:

RUBBER ADVANCES.

MANUFACTURERS HAVE DOUBLED AND TREBLED PRICES.

RUBBER goods have gone up 100 to 200 per cent. in the past week. This affects both the wholesale and retail trade. The manufacturers have made an agreement, guarded by a \$5000 bond, to maintain the new scale.

It is strongly advised that everybody read the Cincinnati *Post*: otherwise there might be further advances in rubber prices without manufacturers or dealers being aware of it.

WHY NOT TRY WIRELESS TELEGRAPHY between Pará and Manáos? At latest accounts the Amazon river cable had broken down again, thus shutting off prompt communication with Manáos, which has superseded Pará as the most important center of the Brazilian rubber interest.

THE STEALING OF CRUDE RUBBER.

THE theft of crude rubber from manufacturers and importers still interests the rubber trade, and the action of the New England Rubber Club, as shown in the following circular, is, without a doubt, a wise and progressive move. It is to be hoped that the trade will take pains to place all the information at their disposal before the committee, and that the ultimate result will be that, no market being found for stolen rubber, theft will cease. The circular sent out, requesting replies to be sent to the secretary of the club, follows:

October 15, 1901.

GENTLEMEN: The stealing of rubber from importers and manufacturers, and its sale by unscrupulous persons, is an evil from which the whole rubber trade has long suffered. The New England Rubber Club has therefore appointed the undersigned a committee to investigate and report at an early date, and recommend remedial action.

That we may be more fully acquainted with facts upon this important subject, we respectfully ask the coöperation of the whole trade in answering the questions that appear on the enclosed postal card. The committee would also be glad to receive in detail any suggestions that may occur to you on this subject.

Probably the most practical way of remedying the evil is to prevent the thief from finding a market for stolen rubber, and with that idea in view, the committee will doubtless recommend—

First. That every dealer or broker of rubber be asked to subscribe to agreements that he will carefully investigate the title of every lot of rubber he offers for sale;

Second. That every purchaser be invited to report any lot of rubber offered by any person not a recognized dealer; and

Third. That a suitable committee be chosen with authority to employ a public detective agency to trace out the title of suspicious lots.

The fact that rubber is freely exposed in factories calls for coöperation and mutuality on the part of every dealer and manufacturer, and the undersigned will be happy to receive from you any communication on this subject, but request particularly that you will answer the questions on the enclosed postal card.

Thanking you in advance, we are,

Yours very truly,

F. C. HOOD
A. W. STEDMAN
C. H. ARNOLD
H. C. PEARSON } Committee.

The questions on the postal card are:

1. Have you reason to suppose that, at any time in the past, crude rubber has been stolen from you, either in transit, in storage, or during process of manufacture?
2. Have you had rubber offered to you, by other than regular dealers or importers?
3. What would you suggest as the most effective means of guarding against the stealing of rubber?

CRUDE RUBBER THEFTS IN HAMBURG.

THE *Gummi-Zeitung* of October 14 says: "The well known rubber firm of Weber & Schaer, Hamburg, have come on the track of a great many thefts of crude rubber, especially through the fact, that repeatedly great differences in weight were discovered, especially with shipments going abroad by steamer. In the interest of all parties concerned, the matter had been handed over to the criminal section of the police department. The investigations made have had the satisfactory result so far, that a number of thieves and receivers of stolen rubber have been locked up. As those thefts were beyond doubt aided through the fact, that thieves and middlemen could find means to sell those goods to manufacturers, the said firm found it advisable to send the following circular to all German rubber manufacturers:

It unfortunately has been evident, for some time past, that robberies have been committed, at an increasing rate, from cargoes of raw rubber,

stored here, shipped from, or transhipped via Hamburg. There has been, particularly, a considerable trade in so called samples of rubber. The local criminal police, in whose hands the matter now rests, have already arrested and hold for examination a number of perpetrators of these thefts. They have rendered possible by the fact, that the thieves have succeeded in selling the stolen goods by the intermediary of dealers in commercial products generally and other middlemen.

We therefore respectfully ask all rubber manufacturers not to buy small consignments of so called sample rubber from Hamburg firms not known as raw rubber dealers or importers.

At the same time we express to those, who, during the last year have received such shipments from purveyors not known as rubber dealers, our courteous wish that they supply us as soon possible with the names of the sellers and the details of such consignments, to enable us to investigate their origin here.

"It would be most desirable in the general interest if this procedure of the firm of Weber & Schaer should find support, providing them with any material which may in any way aid in the clearing up of this affair."

EXPORTS OF AMERICAN RUBBER GOODS.

THE values of exports from the United States of goods classed as "manufactures of India-rubber" during the first eight months of 1901, compared with former years, are stated officially as follows:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
Jan-June.....	\$300,095	\$200,267	\$920,134	\$1,420,706
July.....	51,554	91,089	153,488	296,121
August.....	47,268	102,951	129,264	279,483
Total, 1901	\$398,917	\$394,397	\$1,203,086	\$1,996,310
Same, 1900	359,840	350,286	1,000,839	1,710,965
Same, 1899	(a) 110,604	169,688	1,024,206	1,304,498

(a) Included in "All Other" prior to July 1, 1899.

[Exports to Hawaii and Porto Rico not included.]

There were exported in August 260,709 pairs of rubber footwear, against 221,021 pairs in August, 1900, and bringing the total exports for the present calendar year up to 895,046 pairs. Exports of reclaimed rubber, from January 1 to August 31 have been:

	1899.	1900.	1901.
Value.....	\$285,817	\$373,605	\$230,246

RUBBER FROM THE BENI RIVER.

ACCORDING to a report from the Belgian minister to Chile, in relation to Bolivia, there were granted in the department of La Paz, during 1900, forty-five concessions for the extraction of rubber, embracing a total of 1707 *estradas*—approximately 256,050 rubber trees.

The exports of rubber through the custom house at Villa Bella, at the junction of the rivers Beni and Mamoré, are reported to have been as follows (in kilograms):

YEARS.	Fine.	Medium.	Total.
1895.....	684,422	78,485	762,907
1896.....	741,341	69,910	811,251
1897.....	669,125	68,564	737,689
1898.....	774,449	96,114	878,563
1899.....	725,310	89,122	814,432
1900 (six months)....	343,536	38,607	382,143

It is intimated that perhaps as much more rubber has been smuggled past the custom house.

NEW CALEDONIA.—The exports of rubber from this colony during the first six months of 1901 amounted to 4292 pounds. The exports during the whole of 1900 were 52,983 pounds.

THE ACID AND VAPOR CURES.

By a Superintendent.

EVER since the days of Charles Goodyear more or less has been done in the vulcanizing of rubber by what is known as the cold cure process. At times certain lines of work have adopted this method on a very large scale and have been fairly successful. For example, there was a time when a factory in Providence made large quantities of rubber shoes, all cured in this manner. Later the American mackintosh business went very largely into the vapor cure, but for a variety of reasons this was not particularly successful, and it was entirely dropped in favor of dry heat vulcanization. For certain puregum goods, however, the process has always been followed with more or less success—perhaps in European countries with a greater degree of success than in the United States, until within the last three years, when there has been noted a large increase in goods produced in this way and a much finer product.

Indeed, American goods of this sort to-day are rapidly capturing the foreign markets. Experts in this line predict a great future for cold cured goods. Among them are those who claim that nearly every variety of rubber work can be cured by it as now used, or by adaptations of it. Whether this is true or not, it certainly has been proved that goods are turned out that are long lived, elastic, and of a most beautiful finish. It is also to be noted that cheaper stocks are being successfully treated than was possible in the past. Little by little the dipped goods manufacturers are coming into the field of general druggists' sundries, but that they will some day monopolize it, as the more enthusiastic predict, is hardly likely.

The acid cure, pure and simple, is used only on thin dipped work. That is, a cement that will flow easily, is made and forms of porcelain, glass, or wood are dipped into this cement and withdrawn slowly so that it drains off evenly and without air bubbles. A number of secret compounds are used in the making of this cement, as it is necessary to have the blend so smooth that it will drain off smoothly and yet not too quickly. After the solvent has evaporated and the rubber has hardened upon the forms the vulcanization takes place. A mixture of $\frac{1}{2}$ pound of chloride of sulphur to 4 pounds of bisulphide of carbon is the ordinary vulcanizing solution. Into this the dipped goods are submerged from ten to fifteen seconds, when they are stripped from the molds and again dipped. The rubber is then placed in a bath made of 20 gallons of soft water, $\frac{1}{4}$ pound of chipped borax soap, and 1 ounce of ammonia. The goods are allowed to soak in this for about two hours and then rinsed with clear water. Of course, this process is only used for articles made up of an even thickness of rubber not over $\frac{1}{4}$ inch.

It is to be noted that heavily compounded stocks are not generally suitable for this sort of work, nor stocks that contain oil or rubber substitutes; also that silk is the only fabric that will withstand the acid cure. Where the dipped work is used, it is customary to have the employes protected from the fumes by having the work in a close covered cabinet in which the dipping is done, an exhaust fan drawing the fumes away.

A very interesting part of the acid cure is that which applies to "blown goods," such as toy balloons. These goods are dipped in the vulcanizing solution and at once inflated to about seven times their normal size, the object being to allow the fluid that still adheres to the surface of the rubber an opportunity to cure it more evenly. After this expansion the bal-

loons are thrown into a basket and the air is allowed to leak slowly out through the valve by which it was admitted, which by the way is made so that it is just leaky enough for the purpose. Only a small portion of the dipped work is blown, however, some manufacturers claiming that the expansion of the rubber during the cure is wholly unnecessary and that rubber properly cured without expansion is far more dense and every way desirable, while others hold just the reverse opinions. It may be noted, however, that both schools make excellent goods.

The vulcanizing of goods by acid fumes, a process that is often used, is done in a vaporizing room made of clear kiln dried white wood boards, the ordinary size being 7 feet wide, 7 feet high, and 12 feet deep. This room is made with the frame on the outside, the sheathing being on the inside, and is put together with galvanized nails, screws, and hinges, the steam fittings being also galvanized. This is lined with $\frac{1}{4}$ inch asbestos board and has for heating about 180 feet of 1 inch pipe placed inside of the room about 6 inches above the floor. The pipe, by the way, is arranged in two coils, one on each side of the room, leaving a clear space in the middle. A $\frac{3}{4}$ inch board is then cut into $1\frac{1}{4}$ inch strips, 7 feet long, with round corners, which strips are placed crosswise in the heater, two inches apart and 6 inches below the ceiling. All the uncovered woodwork is then covered with shellac. The heater is then fitted with four small sliding doors, one on each side, the bottoms of the doors being level with the steam pipes. A ventilator with a damper is then placed at the rear of the room and as near the top as possible. The front of the room should have folding doors the entire width of the room. This vulcanizing chamber, of course, is arranged for the curing of coated cloths which are festooned from between the cross bars, already described, the bottom folds hanging about 12 inches from the floor. A heater of this size will hold about 400 yards. A small china dish is then placed on the pipes at each of the sliding doors and in each one is poured $\frac{1}{4}$ of an ounce of chloride of sulphur. The doors are then closed and the room kept tight for from 15 to 20 minutes, depending upon the thickness of the goods. The ventilator is then opened, as are the small doors, and about 20 minutes are allowed for the fumes to pass off. In the meantime clean plates are put upon the pipes, in each of which is an ounce of ammonia. After 20 to 30 minutes, with the ventilator opened about half the time, the goods may be removed.

In the vulcanization of dental dam the same process is followed, except that it takes about $1\frac{1}{2}$ hours to vulcanize, and 1 ounce of chloride of sulphur is used, the heat being turned off after the first hour. The amount of heat used in this vulcanization never exceeds 150 F. In building a vulcanizing chamber, it should be on the top floor of the building, away from all mixture of oils, and where the fumes cannot come in contact with sheet zinc, or other easily corroded metals.

In the vulcanization of dress shields in a chamber of this sort, a tumbling barrel is made with cross bars running from one end to the other. This is covered with $\frac{1}{4}$ inch galvanized or nickel wire. A very good size for a barrel of this sort is 2 $\frac{1}{2}$ feet in diameter by 5 feet in length, so set that it will make 27 revolutions a minute. This will hold a number of gross of dress shields and the vulcanization very easily accomplished. Cloth covered shields will vulcanize in 20 minutes and pure gum shields $1\frac{1}{2}$ hours.

RUBBER AND GUTTA-PERCHA IN THE PHILIPPINES.

By Frank J. Dunleavy.

TO THE EDITOR OF THE INDIA RUBBER WORLD: There is rubber of value in the Philippines, and Gutta-percha also, and several varieties of the latter and many other gums or gutta-like substances which are not Gutta-percha, but are mixed with the latter by the Chinese and the Moros. To-day one of the mountain tribemen, a Tiriria, came to me with five bundles of what he called *Goma* (all gummy substances are sold under the name of *Goma* here, whether it be India-rubber, Gutta, Balata, or one of the other kinds). To the uninitiated they might have appeared like coils of Gutta wound up, rope like, around a bamboo, but when I examined the material every second coil or rope was an adulteration. I passed him out and he sold the whole as Gutta-percha to a Chinaman. The latter will boil it all down, extract some of the chopped bark and dirt, and ship it to Sandakan, in Borneo, where it will be bought up and shipped to Singapore and appear in the market quotations as Borneo Gutta.

This has been going on here since 1887, more or less, though few outside of the Chinese and the Spaniards knew this island was a Gutta producing island. I am not very familiar with the Gutta trade under Spanish rule here, except that I know the price used to be from \$10 to \$25 Mexican per picul of 133½ pounds. There was not much of it shipped because the Spaniards had very hard and fast forestry laws and only allowed the gathering of Gutta and Rubber under strict supervision, and only by tapping the trees in a certain way and at certain times of the year.

When the Spanish garrison was withdrawn from this town, after the late war, the Chinese traders took charge of matters here, under the direction of a half-breed Chinese and Moro Datto. The latter made slaves of everyone who opposed his will and the beautiful valley of the Rio Grande run riot till the American troops could come and occupy the town, which was some six months after the Spanish evacuated the place. Then, for some reason no sane man could ever understand, the forestry laws as they applied to the gathering of Gutta and Gum elastic were suspended and the Americans allowed the Chinese to come in great numbers and start cutting down the trees and thereby destroying them so that they could gather the Gutta and Rubber. The same destruction of Gutta trees that had been going on in the Malay peninsula further south for a number of years was started and has been kept up till now.

The trees are cut down and then chip ring circles at intervals of say a meter are cut into the trees. This is continued along the trunk and branches and the *latex* is guided into pieces of bark or leaves. They then gather the whole of the product, with chips, bark, and dirt, and boil it with a little citreous bark or wild lemons and coagulate it, with dirt and everything mixed in to make it weigh. Another method is to chip ring the tree standing and then light a fire around the tree so as to hasten the flow of *latex* by heat. This method, while not killing the tree outright, serves to hinder its utility for some years after. The Chinese and the Moros who do this claim they have never been shown how to make incisions and tap them, but this is not true. They pursued the above methods because, with tapping where one will collect 5 pounds of Gutta, with cutting down and collecting in the manner described one can collect from 15 to 25 pounds of Gutta to the tree.

You can realize what Uncle Sam has lost when I tell you

that, according to figures I took from manifests at the custom house at the port of Jolo, in the month of May last, no less than 426,426 pounds of Gutta and Rubber was exported from this island to Borneo and Singapore between the month of December previous and up to that time. Put this amount at the large average of 20 pounds to a tree, and it will give us 21,321 Gutta and Rubber trees destroyed—mostly Gutta—and, all the customs collected on this large amount was \$140 Mexican, notwithstanding there was a forestry tax to pay of 10 per cent. on the valuation, I have known some of it to sell in Sandakan for \$120 Mexican per picul of 133½ pounds, though the average would have been about \$70 to \$80 a picul.

But last month the Forestry laws were enforced to the extent of collecting the 10 per cent., though no attempt is being made to prevent the sale of Gutta that has been gathered by the destruction of the trees. I expect, as a matter of protection for themselves, that the Forestry department will prohibit the trading in any kind of Gutta or Rubber except what has been tapped. It is late in the day for this district, as one has to go ten days march up the valley now to see a Gutta tree, but there are other districts equally as rich in Gutta as this was. The civil government are anxious to conserve to the country this valuable asset in Gutta, and with that purpose in view have dispatched a special agent to Sumatra to study the new method of extracting Gutta, by which it is claimed one can extract more Gutta by this method than if the tree was cut down and destroyed, without harming the tree in the least for the following season. This agent, I hear, will be sent down here on his return to instruct us novices that are interested in the Gutta industry. If such is true the position is simply this: If the government had the 20,000 trees that have been cut down during last year and they could extract say even 12 pounds of clean Gutta to a tree, worth in New York \$1.75 gold a pound, each tree would be worth in a year's products \$42 Mexican. To pay 10 per cent. to the Forestry bureau on this would mean \$80,000 Mexican a year revenue. But for the sake of being on the safe side cut this in two, and say \$40,000 a year. You can calculate what wealth is in the forests of Mindanao.

No doubt when the government get this proposition well in hand the United States possessions will figure as a Gutta and Rubber producer, and, with a chemist and proper equipment, they will be able to classify the various other gummy substances and give them their proper value in the market. No white man has made a single cent out of all the destruction of these trees so far as I know; as the whole business was carried on by the Chinese who have been paying \$100 a day for a steamer for the last six months to do nothing else but run between here and Sandakan and carry Gutta and Rubber out of the country.

Gutta is selling to-day at from \$30 to \$50 Mexican per picul. The quotation in the last INDIA RUBBER WORLD to hand ranges from 65 cents to \$1.75 gold per pound in New York.

The Gutta when it leaves here is rolled around the joint or one length of a bamboo and the latter is filled with water. The Gutta is rolled till it is about 10 to 12 inches in diameter and long enough to conceal the bamboo. The idea is that in handling the Gutta in discharging at Sandakan the plug will be knocked out of the bamboo and the water percolate through the whole package and make it weigh. If the plug happens to stay in it will weigh well also.

I have seen the Chinese putting stones in the center also and inferior Gutta and dirt, and other substances, so you will see it is no wonder this Gutta brings such a low price. The government, if they want to build up a reputation for Philippine Gutta, should prohibit the Chinese from dealing in it, and allow none of it to be exported unless tapped and stamped to show where it comes from. I do not claim to know much about Gutta, though I have handled a great deal of rubber in Madagascar, but as I am the only white civilian in this pueblo, and being interested in the development of the country, I give you those facts for the benefit of your readers.

Since I have written the above the government has done the right thing. The government has issued an order that any more rubber or Gutta collected by destroying the trees will be confiscated.

Cattobatto, Island of Mindanao, P. I., August 28, 1901.

AN EVIDENCE OF OFFICIAL INTEREST.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The Forestry bureau of the Philippine Islands would be under many obligations to you if you would furnish us with a list of the most valuable and practical books on the subject of rubber and Gutta-percha. The enclosed list is one furnished by the Agri-

cultural department at Washington, and is submitted to you for any additions you may wish to make.

There is a large area in the Philippine Islands in which we find Gutta-percha and many varieties of rubber. At present there is no one to properly investigate our resources in that line, and the initial steps have been taken by awakening an interest in the Forestry schools at Yale and Cornell. These schools will gather together all the available literature on the subject; will call on the Agricultural department for its rubber expert to deliver a few lectures; practical rubber men will be asked to give the young men a few talks on the subject. These, combined with a few visits to rubber works will be sufficient for the present. The force of foresters for the Philippines will be largely drawn from the young men of these two schools, and it is hoped that a few of them will be qualified within the next year or two to properly investigate and control these valuable products.

Any suggestions you might offer will be appreciated. I return to the Philippines in a week or two. - - - Yours respectfully,

GEORGE P. AHERN,
Captain 9th Infantry.
In Charge Philippine Forestry Bureau.

Washington, October 28, 1901.

CRUDE RUBBER CONTRACTS.

THE subject of contracts in dealing in crude rubber comes up in various ways, and at times in such a manner as to cause irritation and engender ill feeling. Hence it has occurred to me that a statement of how such contracts are entered into and the customs regulating the same might clear the atmosphere and bring out such comment as will be to the mutual advantage of buyers and sellers. During the past decade there have been, probably, a greater number of differences between buyers and sellers but for smaller amounts than during the previous ten years.

The following questions occur to me for consideration by which it will be seen that a wide subject is opened up:

- First. What is a contract?
- Second. What kind of a contract is made?
- Third. How are these contracts signed?
- Fourth. How does the buyer accept the contract?
- Fifth. Can a seller cancel a contract?
- Sixth. Can a buyer cancel a contract?
- Seventh. If differences arise how are they adjusted?
- Eighth. Over or under deliveries—how to be treated?
- Ninth. A contract expires undelivered by seller. How shall buyer govern himself?

I. Webster defines the word Contract: "To enter into; to be liable to; to incur; to gain." The synonyms are: "to shorten; abridge; epitomize; narrow; lessen, condense; reduce; confine; incur; assume."

II. The seller, or broker, upon effecting a sale, hands or mails to the buyer a contract worded about as indicated in the following forms, differing according to the conditions of the transaction:

GENTLEMEN: We have sold you this day about Ten (10) tons Upriver Fine Rubber @ 88 cts. lb. ex. store (or dock), New York, N. Y.

Terms: Cash in ten (10) days from delivery [or, option to give a 4 mos. note with interest added @ 6 per cent. per annum].

[Signed] _____.

GENTLEMEN: We have sold you about Fifteen (15) tons Upriver Fine Rubber @ 86 cts. lb. ex dock, New York.

About (5) Five Tons for delivery in Oct., 1901.

" (5) " " " " " Nov., "

" (5) " " " " " Dec., "

Terms: Cash Ten (10) days from delivery ex dock New York.

[Signed] _____.

III. The contract is signed by the seller only—excepting in the case of a broker, in which case the broker signs as selling "for account of" the seller to the buyer and hence signs his own name.

IV. This contract, either by hand of the seller (or broker) or through course of mail, reaches the buyer, and custom has made it not necessary to acknowledge the receipt of same; but if such contract is not in accordance with the understanding of the buyer, custom rules that "silence gives consent," and in the event of the contract having been filed away without controversy, the contract becomes binding, just as if the contract had been accepted by the buyer, as complaint about the wording of contract should have been made during the Ten (10) days following the date of the contract.

V. The contract now being in force, we next pass to the arrival of the rubber, and delivery of same, or, if in store, the delivery only. The seller either tenders delivery order, or, having shipping instructions, ships the rubber, the goods being reweighed and, in the case of Pará, *re-tared*. (African and Central tars are re-estimated.) The buyer also pays the cartage and freight, and the rubber becomes the buyer's from the moment that the delivery leaves the seller's hands, or delivery is made to the cartman, and only legal process can divert the ownership. This being so, the buyer turns to the goods for quality and quantity, as described in the contract.

Being Pará, unless a clerical error is made, the weights of the sworn city weigher is final, as he is a public weigher and there is nothing for him to gain in falsifying weights. Buyers should weigh and tare the rubber as soon as received, so that any errors may at once be detected and any stealing traced. Stealing *en route* is loss to the buyer, recoverable from the transportation companies, and sellers always assist buyers by producing receipts and weigher's returns in the originals. Sellers should always place the gross weights upon the receipts which they get at time of shipment, duplicate of which should be sent to buyer when any large quantity is shipped.

Paras are always weighed and tared, but Centrals, Africans, and East Indian rubbers cannot be, as is obvious; hence estimates are made based upon the original tare, and buyers are fair in meeting any errors which may occur in this respect.

Next, and last before settlement, is the question of quality, to be passed upon by buyer. The rubber is opened and examined by the buyer, or his superintendent or compounder, and, if bought "as per sample," compared with the sample, but as, in this instance, "Fine Pará Upriver" was to be delivered, the buyer decides whether it is, first, "Fine"; second, if "Upriver." If not, then the buyer looks to the seller to replace either the whole lot or that portion of the lot that is inferior, but the seller has the right to insist on the whole lot being replaced if he so desires, the buyer not to exercise his own option and pick out the best in the parcel. The seller, however, should be required to provide the buyer with rubber to replace at once—but in no case can the seller consider that the buyer, by his act of refusing rubber not up to grade, as a cause on his part to refuse to replace the lot or part of the lot, nor can he decide that he can take the lot back and call the refusal of the lot a cancellation of the contract, but is required to fill contract with "Upriver Fine Pará Rubber" and not in whole nor in part with an inferior grade.

VI. Nor can the buyer use a subterfuge and, by claiming that the quality is not right, refuse the opportunity to the seller to examine and or replace the lot or part of the lot complained of, nor can he or they, because the market has dropped, say, 2 cents, require the seller to take the rubber back and cancel contract because a couple of cases are defective.

VII. Wouldn't it be a good idea to adopt, for the settlement of differences the method used in England—Arbitration? The very fact of a difference which cannot otherwise be adjusted could be by that fact a case for arbitration and a committee to be selected by outside parties (in England by the Board of Trade) would look into the questions and rubber in dispute, and the losing party would pay the small fee required, and the decision should be final. This method is easy and the expense nominal.

Here the disputants "sulk in their tents" and enough time and good feeling is used up, in addition to lawyers' fees, to pay any gain or loss. Good "horse-sense," practically applied to a contract, goes a great way, and arbitration is applied horse sense.

VIII. Over and under deliveries of a contract should be avoided. Mr. A. buys "about 5 tons" of rubber. In the rubber trade a ton is the gross ton—2240 pounds, or about 1000 kilograms, 5 tons being 11,200 pounds. The seller perhaps delivers 10,850 or 11,750 pounds, if in casks, or 200 to 300 pounds over or under, if in cases, and if in bales, one bale over or under would be about correct, although sometimes from one to three tons are delivered or cancelled by sellers without an understanding with the buyer, but many times the seller overdelivers on a rising market, to equalize one on a falling.

Weighers sometimes make mistakes and, as they at times have hundreds of cases to weigh, and a 5 ton lot is about 32 cases of 350 pounds. But suppose he weighs up 32 cases and finds that they average 360 pounds; there would be an over delivery of 320 pounds. Again, if they should deliver a dry lot and the market was advancing—32 case year store cases average weight of 332 pounds making 10,624, or a shortage of 576 pounds. When the weigher gets back to his office and figures up he finds these differences, but the rubber has been forwarded and it is too late to make the corrections. They sometimes err to the amount of 1000 or 2000 pounds.

If a contract is made to take a certain lot of about 5 tons to

arrive, and it turns out 4 tons or 6 tons, it has become the custom to call the contract filled, and the buyer takes any excess and the seller does not expect to make up to 5 tons if it falls short. Any difference of quality is usually adjusted on the dock or at the factory upon arrival.

IX. If the seller of rubber in the contract cited, under paragraph II., fails to deliver or tender delivery of the rubber on or before the last week day of the month specified, without a mutual arrangement for delay, the buyer should enter the market at once and fill his wants up to the amount covered by said contract at the best prices and terms, and for seller's account and charges, and any loss to be chargeable to seller.

If the buyer waits a week or a month before covering his contract, and the price should then have advanced 2 or more cents a pound since the first, then the buyer can only recover on the basis of the price on the first of the month, and not the full advance.

BAY STATE.

October 7, 1901.

NEW PHILIPPINES TARIFF.

THE revised "Customs Tariff of the Philippine Archipelago," as enacted by the United States Philippines Commission, has been promulgated officially, to go into effect on November 15. Its promulgation at this time may be regarded as an indication of the faith entertained by the war department that the supreme court will take the same view in regard to the constitutionality of revenue relations with the Philippines as it did in the case of Porto Rico.

The principal provisions in regard to rubber are contained in the following paragraph—"N. W." denoting net weight:

352. Caoutchouc and Gutta-percha manufactured into any kind of article not otherwise provided for: (a) Rubber hose and piston packing, N. W., kilo, \$0.03; (b) hard rubber articles, not otherwise mentioned, N. W., kilo, \$0.50; (c) boots and shoes of rubber, N. W., kilo, \$0.25; (d) all other articles, except hose of rubber and textile, N. W., kilo, \$0.20; (e) hose of textile and rubber, N. W., kilo, \$0.10.

Other provisions are contained in the paragraphs following:

[Cotton Schedule]. 135. Waterproof or Caoutchouc stuffs on cotton textiles, or elastic textiles manufactured with threads of gum elastic, N. W., kilo, \$0.15.

[Linen Schedule]. 160. Waterproof or Caoutchouc stuffs on textiles of linen or other vegetable fibres, except cotton, or elastic textiles manufactured with threads of gum elastic, N. W., kilo, \$0.25.

[Silk Schedule]. 175. Waterproof or Caoutchouc stuffs on silk textiles, or elastic textiles manufactured with threads of gum elastic, per centum ad valorem, 40.

248. Apparatus and appliances (not machinery) for electric lighting and power: (a) - - - insulating coils; and all insulating materials not elsewhere expressly provided for, N. W., 100 kilos, \$3.00; - - - Only articles used exclusively in the generation and distribution of electric currents for light or power shall be classed under this number.

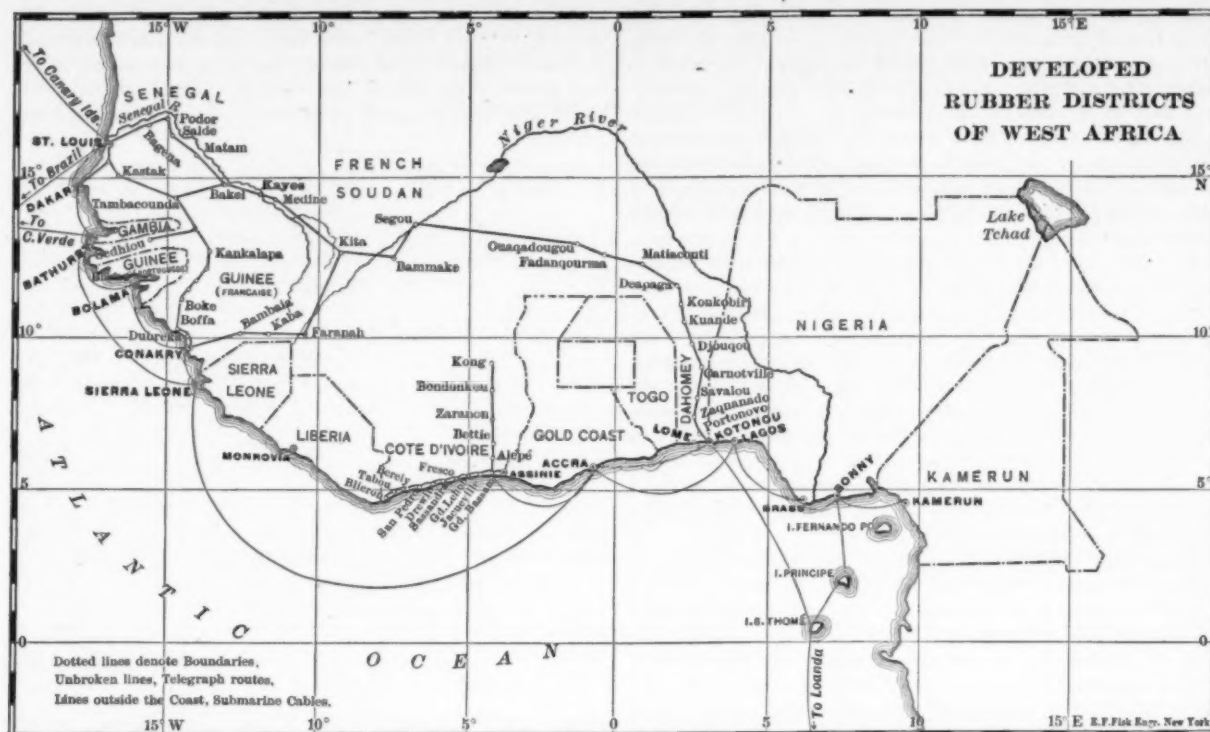
339. Combs: (a) Of horn or India-rubber, N. W., kilo, \$2.00; - - -

In the free list appears:

395. Submarine telegraph cables.

The following calculation gives the equivalent rate of duties in gold, per 100 pounds, net weight, on the articles referred to in the preceding classification:

Rubber hose and piston packing.	\$ 1.35
Hose of textile and rubber.	4.55
Rubber boots and shoes.	11.36
Hard rubber combs.	90.90
Hard rubber, not otherwise specified.	22.73
Other rubber and Gutta-percha.	9.09
Goods in cotton schedule.	0.86
Goods in linen schedule.	11.36
Insulation for light and power plants.	135.45



FRENCH SOUDAN AS A SOURCE OF RUBBER.

THE widening of the French sphere of influence in Africa promises to have an important bearing upon the question of rubber supplies during the next few years.

Within a recent period colonial administrations have been developed in Senegal, French Congo, and French Guiana—not to mention Madagascar—to a degree that has fostered the investment of French capital in commercial and industrial enterprises in those regions, and led to the establishment of direct lines of shipping to French ports, and the creation of markets in those ports for colonial produce. As in the case of the English, Belgian, and German possessions in the middle third of Africa, the exploitation of India-rubber has appealed to the French administrators and traders as affording the readiest means of developing commerce in their new colonies, since the high values of this commodity permit it to be transported over long distances at a heavy cost.

All reports are to the effect that the French colonies referred to, so far as they have been explored, are as rich in rubber as any other section of Africa, the Congo Free State not excepted. The latest development in this connection has been in the region known as the French Soudan, embraced in the colony of Senegal, and lying west and north of the river Niger. This region adjoins the British Niger territories, which for several years have yielded considerable rubber. The colony of Senegal has exported rubber for a dozen years or more, from its capital and chief port, Saint Louis, at the mouth of the Senegal river. To this port, by the way, and to other French ports on the West African coast, has been diverted, since the growth of French enterprise on that coast, no small amount of the rubber business which formerly centered at the British

port of Sierra Leone, this being one explanation of the decline in the amount of so-called "Sierra Leone" rubber coming into the markets.

The headquarters of the rubber trade in the French Soudan is the town of Kayes, at the head of navigation on the river Senegal, and which is the official residence of the military commandant of that district. Under the auspices of the military rubber has been gathered, both for the discharge of the taxes due from the natives, and also for the instruction of the natives in a profitable employment. The authorities have gone so far as to establish at Kouroussa, in the same district, a school to which natives from various parts of the country are brought for instruction in the proper extraction and coagulation of the rubber latex. Two reports of value have been made on the French Soudan rubber. One is by Monsieur Chevalier, a botanist, to the military commandant, on the character and distribution of the rubber plant found in the district—a creeper known locally as the "gohine." The other report is from Monsieur H. Hamet, the head of a scientific commission appointed by the governor of the colony to report on the rubber situation from a practical standpoint. The information thus collected is of a most promising character.

The rubber creeper here is that designated by the botanists as the *Landolphia Heudelotii* (it has been described also as *L. Senegalensis*), and it appears thus far to be confined to the region in question, though the rubber produced doubtless has the same general character as that yielded by other species of *Landolphia*, elsewhere in Africa. M. Hamet reports, however: "The Soudan rubbers compare favorably with those from the Belgian Congo, having all their purity, resistance, and nerve,

and they also have greater resistance to heat." He found on an average from 40 to 60 of the creepers to an acre, of which from 16 to 25 would be larger than a man's arm. A creeper 10 years of age yields as many gallons of latex per year, containing 28 to 30 per cent. of Caoutchouc.

M. Hamet reports* some details in regard to coagulation which may prove of interest as leading in time to the treatment of African rubbers which will develop their best possible qualities. The latex of the "gohine" creeper, he says, "consists of two parts:

"(1) The liquid containing the rubber proper, with albuminoid matter and a vegetable wax.

"(2) The serum, which contains the constituent water, mineral matters, and azotized [nitrogenous] matters, which the rapid fermentation of the latex carries off before any coagulation takes place. On the other hand, these matters imprisoned in the bitter waters tend to deteriorate the rubber. It is these fermentable agents that it is absolutely necessary to destroy either before or during the coagulation.

"These two operations are effected by one stroke by using fluoride of sodium—antiseptic and very strong—in the proportion of 2 per cent. of the weight of the latex."

There are, it seems, other antiseptics, including ammoniacal acid, which do not coagulate, but coagulation may be effected by various means: (1) Mechanical or centrifugal; (2) heat; (3) smoking; (4) chemical agents—as sulphuric or oxalic acids; and (5) decoctions of native plants. Such decoctions have been left to stand over night and filtered through a cloth the next day, and then warmed to the boiling point before being added to latex previously aseptized. The result is said to have been the coagulation of a rubber of the very first quality.

Without regard to the output of rubber from other portions of the colony of Senegal, M. Hamet gives the following statement of the value of exports from southern French Soudan:

In 1895.....	2,217 francs.
In 1898.....	322,586 "
In 1899 (partly estimated)....	1,600,000 "

In the latter year the production was estimated at 400,000 kilograms (=880,000 pounds). No doubt it has since become much larger. During several months past the arrivals of Soudan rubber at Bordeaux alone have been at the rate of 835,000 pounds a year, and Soudan rubber is received also at the French ports of Havre and Marseilles. The above estimates of values are on a basis of 4 francs per kilogram (=35 cents per pound.) Such rubber, however, brings a much higher price in the consuming markets, as indicated by the prices obtained at Bordeaux, reported in the last INDIA RUBBER WORLD, equivalents in American money being supplied for the French prices:

	Francs (Kilo.)	Cents (Pound.)
Soudan twists, fine.....	6.80@7	59.6@61.4
Soudan twists, ordinary.....	6.	52.7
Soudan niggers, fine.....	6.50@6.75	57. @59.2
Soudan niggers, ordinary....	5. @6.	43.9 @52.7

Respecting the Caoutchouc market at Bordeaux, a correspondent there writes to THE INDIA RUBBER WORLD: "The market here is all the time extending, and lately the Americans have—by the intermediary of Liverpool houses—bought almost all of the Soudan lots that were for sale. Why don't the Americans come directly to Bordeaux and buy?"

Small lots of Soudan rubber have been arriving in the New York market for several months past. The quality has been satisfactory, and good prices have been realized. A member of the importing trade informs THE INDIA RUBBER WORLD

that the quality is equal to that of the best "red Massai" rubber received from Sierra Leone, and predicts a steady demand for the new grade if the present quality is maintained. The best grades have sold in New York at 63 cents per pound—a trifle higher than the latest quotations reported from the Liverpool market.

A NEW RUBBER FROM PERU.

INTEREST is being manifested in Peru, since the decline in the production of Caucho in that country, in a new product, which locally has been termed Gutta-percha, though its nature is that of India-rubber. It is, in fact, as represented to THE INDIA RUBBER WORLD, the product of a tree apparently of the *Hevea* family, which embraces also the Pará and Bolivian rubber trees. This tree, which has been found only of late to yield rubber, is mentioned as being very abundant, existing in the forests nearest to Iquitos, and being found up the Marañon, and up the Ucayali as far as the Pichis river. These locations indicate that the tree is found at higher altitudes than the Pará rubber of commerce. The trees are worked in *estradas* and the latex is smoked. Little is known to have been done in the way of exploiting this new rubber, but samples sent to Liverpool are reported to have been valued at about 10 per cent. less than fine Pará. Iquitos merchants are advising the collection of this rubber on a large scale, and the chamber of commerce of that city has issued a circular to rubber collectors to the same effect.

THE works in England of the ill fated Gutta-percha Corporation, Limited—formed in 1897, with £200,000 capital, to extract Gutta-percha from the leaves of trees—have fallen into the hands of Campbell P. Ogilvie. According to the *South American Journal* (London) Mr. Ogilvie is a man of scientific attainments who is familiar with South America, and he believes that he has discovered in the Amazon river country a Gutta percha producing tree of value, the leaves of which he purposes treating at the works referred to above. No details regarding this tree have been made public.

A NEW RUBBER FROM HONDURAS.

A SAMPLE of rubber from Honduras, submitted to the Editor of THE INDIA RUBBER WORLD by Messrs. Eggers & Heinlein, importers, of New York, is apparently very similar to any of the good grades of Central rubbers. It is quite tough and dry, and was undoubtedly coagulated in a shallow hole in the ground, as it has a very strong earthy smell and the outside has clinging to it both earth and vegetation. The same firm send sections of the growth from which this grade of rubber is produced, but they are not sufficient to indicate the botanical species. It recalls, however, the publication in THE INDIA RUBBER WORLD of May 1, 1901 [page 334], of a report that there had been discovered in the department of Yoro a vine or creeper, supposed to be similar to the *Landolphia* creepers of Africa, and said to produce rubber of a good quality. The samples submitted by Messrs. Eggers & Heinlein evidently are from this source.

THE W. D. Allen Manufacturing Co. (Chicago) recently offered a prize of \$25, to be awarded in the high school of Evanston, Illinois, for the best essay on the "Life and Inventions of Charles Goodyear." The prize was won by Gordon Scott Fulcher, whose essay, which has been printed in full in the *Chicago Shoe Trade Journal*, evinces painstaking investigation of his subject and intelligence in the handling of the facts.

* *Memoires de la Société des Ingénieurs Civils de France*. Paris, 1900, page 287.

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

FROM all accounts those few British firms who have entered on this branch, find it a profitable business, as there is no difficulty in obtaining a market for their output. It is recognized that this manufacture is especially one which demands the greatest care and oversight, as it is easy enough to turn out bad work—a result, the seriousness of which need not be emphasized, looking at the small profit on the individual articles.

RUBBER
SHOE
TRADE.

Perhaps it is the disastrous results which attended the efforts of one of our largest factories in this direction, and which quickly led to an abandonment of the business, that have weighed heavily with others whose thoughts have inclined that way; but whatever the reason for the abstention, the only firm who have gone into the business of recent years is Frankenburg's, and from all I hear the period of comparative repose in which they have been feeling their way amidst the shallows that abound, has now been succeeded by an era of prosperity in which they find their capacity for production fully taxed. The North British Rubber Co. are still far and away the largest producers, and will, no doubt, remain so. Apropos of China being a large buyer of their products, I was rather surprised to hear from a gentleman who knows the country well, and who had gone through the lively experience of the siege of Peking by the Boxers, that the use of rubber shoes by the lower classes in China is quite of modern growth. The people never wear leather, and their ordinary footwear is made of paper, with or without a wooden sole. It would seem, therefore, that the rubber shoe has not by any means reached the limit of its possible sales in the Flowery land, and no doubt the sales will show an increase during the period of quiescence which is now setting in. Though not particularly germane to the subject, I may say that I have heard somewhat adverse comments made as to the way the British have allowed the Germans to establish themselves in the commerce emanating from Shanghai, though this does not appear to apply to the rubber shoe trade. I understand that the North British company are building additional premises for this branch, as the business has made such rapid strides of late. With regard to the varnish used by British manufacturers, it appears that in some cases there is room for improvement, and they are willing to treat with those who have, or think they have, special knowledge in this line.

As a rule in Great Britain it is a somewhat difficult thing for a visitor to get shown round, even if he has no connection at all with the trade, though perhaps there is not so much secrecy about the operations as some manufacturers seem to fondly imagine. Of course every one has a right to please himself as to the strength of the barriers with which his operations are encircled, but there is not perfect unanimity amongst our rubber firms as to the necessity for such precautions. Not long ago, at the general meeting of a large company, the chairman said he would be pleased to show any shareholder over the works, a remark it must be said which did not commend itself as politic to all those who were present. Of course care has to be taken lest the application to view should emanate from one whose motives are of a mercenary nature, and from what I have heard surreptitious attempts on the part of foreigners to gain admittance into our large works have not been at all uncommon. Though not exactly germane to the subject, mention may be

VISITS
TO WORKS.

made of the fact that under managers and foremen in large works are as a rule kept strictly to their own departments, and are not allowed to enter work rooms over which they have no direct control. This, considering the changes in personnel which are so frequent in some works, must be considered a commendable precaution, if anything in the form of a secret is to be retained in the place of its origination. Distinguished visitors, of course, do not find any difficulty in satisfying their thirst for technical knowledge, and the autograph book at Macintosh's, which dates back a long time, contains records of the visits of several royal personages.

THE recent establishment of a recovered rubber works in the neighborhood of Liverpool, under American auspices, recalls the suggestion made in THE INDIA RUBBER WORLD from an English source some time ago, that such a works if conducted on a large scale on American principles would be sure to prove a success. I am writing without any details of the new venture, but presumably the bulk of the raw material will be shipped from America, as otherwise it is difficult to see how it could be obtained in sufficient quantity, in Great Britain, at any rate. No doubt more and more recovered rubber is being used, and in many cases it has displaced the oil substitutes. At the same time the manufacturers of it have increased, and competition is becoming somewhat acute. A prominent London daily paper recently contained an advertisement to the effect that a German house required a good agent in England to collect waste rubber, though this reads somewhat curiously in face of the fact that plenty of German waste is on offer to English recovered rubber manufacturers. It may be said, however, that the somewhat inflated prices asked by the Germans have militated against the progress of their export trade in this article, in England, at any rate, and their ideas on this head will have to undergo considerable modification if a material increase in business is to result. With regard to the quality of the different brands of recovered rubber on our market, it cannot be said that any real progress has been made during the last ten years, and in spite of the fact that two or three new brands have had plenty of time to demonstrate their vaunted superiority the popular verdict on them is certainly not one of undiluted approval.

RECOVERED
RUBBER.

In another column of THE INDIA RUBBER WORLD I recently saw a statement to the effect that this journal was regularly read at Oxford University and the fact seems to invite a few remarks. For one thing it indicates that headway is being made at this ancient school of learning in the way of disputing the claims of the dead languages to be the only subjects worthy of study; the movement to modernize Oxford and to widen the scope of studies there is calculated to make deceased Dons turn in their resting places, and certainly such agitation is shared by those of the present day who rightly enough have no wish to see the curriculum of studies approximate to that of a technical school. All the same, seeing how overcrowded are the professions to which the study of classics alone is the open door, what is being done to promote the study of science must be heralded as opportune. It must be remembered that research work in botany cannot easily be carried out by the busy man, even if he had the necessary laboratory accommodation,

BOTANY
AND THE
RUBBER TRADE.

and it is all in the interest of the trade that the sort of work that has been done at Oxford and Kew should meet with encouragement. There is perceptible at the present time a greater interest in the botany of the trade than was at one time the case; manufacturers are evincing interest in the names and geographical distribution of the rubber-yielding plants, and there is no doubt that we have commenced an era which in its progress will show the rubber manufacturer more and more cognizant of details which he has hitherto not troubled to acquaint himself with. A thorough acquaintance with structural and physiological botany would of course necessitate the expenditure of a good deal more time than would be justifiable, but in these days of legitimate enterprise in rubber planting the acquirement of a certain degree of botanical knowledge seems to be most desirable. As a general guide to the geographical distribution of rubber trees the map given in the price list pamphlet issued this year by the Dermatine Co., Limited (London), will be found useful for reference, and no doubt before long we shall see something of the sort on a more comprehensive and detailed scale. It may be mentioned that, in addition to the attention that has long been paid to rubber botany at Kew gardens, the Imperial Institute has of late devoted attention to the same subject, as may be seen by a perusal of the proceedings which are issued from time to time for the information of the public. Its research laboratories for investigating the value of newly discovered species should undoubtedly prove of increasing interest and importance.

THE impression that Michelin's agency for motor tires in Great Britain is held by the Dunlop company is not quite correct. It is the Clipper company, which, however, is a distinction without much difference, as Mr. DuCros is a leading spirit in both concerns. As regards the evolution of the motor car the present tendency is to reduce the diameter of the driving wheels and in fact to make all the wheels of equal size. This may seem at first sight to be indicative of a decreased demand for rubber, but it must be remembered that the number of revolutions will be increased, and therefore the wear on the tire will be greater, thus tending to equalize things. With regard to re-rubbing of covers, although this may be successful enough for bicycle tires, motor car owners have come to the conclusion from experience that it is only a waste of money in their case, as the attachment by solution nearly always fails.

THE somewhat dubious policy of exposing rubber to the vulgar gaze in shop windows is evidenced by the rather deplorable condition of the rubber "in its various stages of manufacture" on the framed and glazed show cards issued by the Waterman Ideal Fountain Pen Co. of Broadway, New York. Some of those in our shop windows show in a state of resinous pulp what is emblematically described as rubber sheet, which no doubt it once was.

THE only redeeming feature as regards the trade generally is that coal has come down in price, thus lessening the burden of manufacture a good deal compared with last year. Otherwise there is no mistaking the rather pessimistic tone which is indulged in on all hands, except in isolated cases where special goods are in demand. The cause of the depression is no doubt rightly attributed to the war, which drags its slow length along and which has paralyzed to a great extent many of our industries. Perhaps the fall in the price of metallic oxides, such as those of zinc and lead should be mentioned in addition to coal, as affording relief from the conditions of last year, but of course, however great the reduction in price of chemicals, the matter is only a comparatively

small one compared with the price of rubber or decreased demand for finished products.

MR. BAMBER, recently secretary to Mr. Baxter at the Leyland Works, has been appointed works manager at the St. Helens Cable Co., at Warrington.—It is reported that Mr. Michelin is growing rubber trees under glass in France on an extensive scale. My informant, who, however, is not exactly a rubber expert, seemed to think that it was the intention of the Clermont-Ferrand works to supply their own requirements of raw material at home, and so to avoid having recourse to the tropics. To me, however, there seems to be too much of a Jules Verne flavor about the report—that is, as far as the ultimate object indicated is concerned. The cultivation of the *Ficus elastica* as a greenhouse plant has long been common in Europe, but no question of its utility otherwise than as an ornament has ever arisen.—At a recent inquest held at an explosive factory the cause of death was found to be the inhalation of naphtha or benzol vapors. I don't know that any actual fatality has occurred from this cause in rubber works, but the fact that such vapors cannot be inhaled with impunity unless they are largely diluted with air cannot be too strongly insisted on.—The New York Wheel and Rubber Tire Co. of 377, Kennington road, London, S. E., have recently put down new plant for making solid rubber tires. This firm, of which Oscar Comte de Nevers is the moving spirit, describes itself on its business paper as the largest rubber tire makers in the world. Personally I know nothing which should cause me to consider the statement as an exaggeration, but it occurs to me that firms such, for instance, as the Continental, of Hanover, might possibly have something to say on the point.—At the October sale by tender of condemned stores of the General Postoffice, London, the quantity of Gutta-percha on offer was 38 tons. There is no doubt that this amount will show a marked decrease in future, owing to the substitution of Gutta-percha covered wires by those insulated with paper.

GERMAN ELECTRICAL COMPANIES.

AT a recent general meeting of the Felten & Guillaume Gesellschaft (Mülheim-on-Rhine, Germany), accounts were presented for the 18 months since the company became constituted in their present form. The profits during that period are reported at £400,308 (= \$2,001,545), out of which was written off for depreciation $2\frac{1}{2}$ per cent. on buildings and 12 per cent. on machinery. A dividend at the rate of 10 per cent. for the 18 months was declared, amounting to £225,000 (= \$1,125,000). The distribution was made on a basis of £1,500,000 capital, though the capital account now stands at £1,800,000. The company's balance sheet showed liabilities of £840,000, and bills receivable for £1,147,500.

Mention was made in the last INDIA RUBBER WORLD of the establishment of a branch in Milan (Italy) by the Elektrizitäts-Aktiengesellschaft, vorm. W. Lahmeyer & Co. (Frankfurt o/M., Germany.) They have also established a branch in England, under the title of the Lahmeyer Electrical Co., Limited, with £100,000 capital. The company had previously established branches in Russia and in Norway, the operation of which is understood not to have been profitable. The Lahmeyer company's total capital has increased during six years from £85,000 to £500,000, and it is now proposed to make it £1,000,000. During the last business year the gross earnings reached £215,805 (= \$1,079,025). The dividend distributed amounted to £50,000, or 10 per cent. on the capital of £500,000. During the five years previous the yearly dividends were, respectively, 5, 8, 10, 11, and 11 per cent.

MOTOR
TIRE
AFFAIRS.

EXPOSURE
OF RUBBER.

CONDITION
OF TRADE.

RUBBER TIRES AT A CARRIAGE EXHIBITION.

THE twelfth annual convention of the National Retail Carriage and Harness Dealers' Protective Association was held in New York, at the Grand Central Palace, on October 14-17, in connection with which was held the eighth annual exposition of vehicles and accessories, lasting throughout the week. Whether or not the number of entries may have exceeded those of former expositions, the impression made upon the visitor was that the collection of displays was larger, more complete, and more varied than in any previous year. There were carriage factories represented from over a dozen states, from Michigan to New Hampshire, and the number of styles of vehicles shown, and the character of the finish of many of them, was such as to lead one to doubt any reports that may have been current of a decline in the manufacture of fine carriages in the United States.

Likewise the exhibits of accessories were very complete, including carriage cloths, woolens, springs, forgings, paints, varnishes, lubricants, bells, couplings, poles, shafts, gears, brake shoes, lamps, wooden and wire wheels, axles, dashes, fenders, canopies, harness, whips, robes, horse tonics, and what not. The attendance was good, and to the onlooker it seemed that everybody who entered the building was intent upon business. On the whole, it probably is safe to say that the effect of the exhibition was to lend strength to the policy of continuing these annual displays of products in connection with the manufacturers' conventions.

In the official catalogue of exhibits a separate heading was devoted to "Rubber tires," and if all the displays under this classification had been grouped together, the result would have been an exhibition of no small interest to carriage manufacturers and dealers, and to the rubber trade as well. As a rule these rubber exhibits were not crowded with material. There was ample space for the reception of visitors, and the salient feature of each display was shown prominently, while competent and experienced attendants stood ready to talk business upon every occasion.

Naturally there was not much shown in tires that was strictly new. The prevailing type was, as usual, the wired on solid tire. The endless solid tires, first introduced prominently at last year's exhibitions, again appeared, but not apparently in a larger proportion this year. There were cushion tires in more exhibits than formerly, and the customary displays of pneumatics. There was the usual number of tires which belong to none of the above types—the class of tires that seldom appear at more than one exhibition. In several tire exhibits were shown tire applying outfits, including some novelties. Several of the tire manufacturers also exhibited rubber mats and matting for carriages and automobiles. The tire exhibits, to take them in the order followed in the official catalogue, were:

SAMUEL ALEXANDER (Hartford, Conn.)—The Tuttle solid rubber and cushion tires, mounted without the use of channeled rims, and held in place by a series of bolts with eyes, engaging the retaining wire and going through the felloe.

BROOKE AIRLESS PNEUMATIC TIRE CO. (Denver, Colorado).—A company incorporated recently, under Colorado laws, to exploit a tire patented by M. E. Brooke (who is general manager of the company), and which is described as "pneumatic," though it is not inflated. The internal construction involves a rubber core "which produces riding qualities similar to a pneumatic tire."

CALUMET TIRE RUBBER CO. (Chicago).—Exhibited the "Calumet" solid tire, held in place by a retaining band with beaded edges, and also a "Calumet" applying apparatus, including a special compressor—a powerful but compact little machine.

COLUMBIA VEHICLE TIRE CO. (Boston).—The distinctive feature of the solid tire shown by this company is a flat locking galvanized tape, jointed mechanically instead of by brazing or welding. The rubber stock is made by the India Rubber Co. (Akron, Ohio.)

CONSOLIDATED RUBBER TIRE CO. (New York).—Exhibited the Kelly-Springfield solid tire, in all sizes. The company have filled many orders for heavy work, as for fire apparatus and the like. They are using three wires instead of four, as in the past, for large tires. This exhibit embraced cushion tires for the first time in 1½ and 1¼ inch sizes. In this display was included also Frank E. Hall's sectional solid vehicle tire.

DIAMOND RUBBER CO. (Akron, Ohio).—An exhibit of solid tires, electrically welded on, in large and small sizes, three wires at the utmost being used; also, cushion tires. The "Diamond" pneumatic tires, as usual, were a prominent feature of this display.

EMERY TIRE CO., INC. (Providence, R. I.).—A pneumatic tire, so called, though it is not inflated, the internal construction consisting of a skeleton core made of rubber, with air cells so arranged as to form air chambers, utilizing the air as a cushion. The core is covered with a rubber casing that may be replaced or repaired without injury to the core.

FIRESTONE TIRE AND RUBBER CO. (Akron, Ohio).—The tire shown here was of the side-wire type. Another feature of construction is the molding of the stock in a coil of small diameter, by means of which the compression is brought onto the wearing surface of the tire. The exhibit embraced a machine for applying the tires, which appeared to be simple in construction and easy of operation.

GOODYEAR TIRE AND RUBBER CO. (Akron, Ohio).—This exhibit embraced solid tires of the wired on type, both of the ordinary form and also the "Wing" section, patented by the company; endless solid tires; cushion tires; and pneumatic tires. There was also a new tire machine, the introduction of which the company is pushing actively.

HARTFORD RUBBER WORKS CO. (Hartford, Conn.).—Here were the well known "Hartford" single tube pneumatic carriage tires, the ordinary wired on solid tire, the "Turner" endless tire. This exhibit also included the Dunlop pneumatic carriage tires, since the Dunlop goods are now manufactured at Hartford, instead of there being, as formerly, a separate Dunlop exhibit.

INDIA RUBBER CO. (Akron, Ohio).—An exhibit embracing two wired solid tires, Wheeler endless solid tires, cushion tires, and pneumatic carriage tires, and also a special equipment for mounting the company's various solid tires.

INTERNATIONAL AUTOMOBILE AND TIRE CO. (New York).—In addition to the wired on solid and pneumatic solid tires made by this company, their exhibit embraced the Lattina cellular tire, which they manufacture for the Rubber Tire Co., Inc. (Philadelphia), and the Kempshall tire. Also, a new tire applying equipment patented by H. W. Keyes, who is connected with the company.

KOKOMO RUBBER CO. (Kokomo, Indiana).—Solid wired on

tires of the usual form of construction, for carriages and automobiles; also, cushion tires.

MORGAN & WRIGHT (Chicago).—This exhibit embraced solid tires, with two wires, larger than in some other makes; solid tires fastened on with retaining bands; and double tube pneumatic tires. The company have always been in position to fill orders for cushion tires, but this year are making a feature of the latter.

NEW JERSEY CAR SPRING AND RUBBER CO. (Jersey City, N. J.)—The "Wemaka" solid vehicle tire, held in place both by a longitudinal wire and by a system of cross wires.

NEW YORK BELTING AND PACKING CO., LIMITED (New York).—Here was shown the "Long Distance" pneumatic carriage tire which this company have been marketing for a year or more past.

STANDARD ANTI-FRICTION EQUIPMENT CO. (New York).—This exhibit embraced, in addition to other carriage accessories, the "Star Brand" wired on solid tire, sold by the Batavia Rubber Tire Co. (Batavia, N. Y.)

STRAUS RUBBER AND TIRE CO. (New York).—Wired on solid tires and horseshoe pads.

VICTOR RUBBER TIRE CO. (Springfield, Ohio).—The "Victor" wired on solid rubber tire, with insulated holes through which the wires pass—a specialty of this company. Also, the "Victor" tire applying machine.

The above exhibitors, for the most part, were represented at the meeting of the Carriage Builders' National Association, held in Cincinnati, during the week following.

ALL ABOUT RUBBER IN BRIEF.

AFTER hearing about rubber for the first time, a reporter for the Pittsburgh *Dispatch*, writing for his paper, quoted his informer as saying what follows, and printed it as fact:

"Within the past three years the demand for rubber has increased over 400 per cent. Formerly the supply forest for this country and almost the entire world was at Pará, Brazil. The increased use of rubber, however, has devastated these forests, and now the country has to depend greatly on Mexico. Fifteen years ago the company with which I am connected purchased 30,000 acres of land at the isthmus of Tehuantepec and planted 300 trees to the acre. They are now bearing. Rubber, as grown in Mexico, costs 6 cents per pound, and delivered at New York at 10 cents. It is sold there at 80 cents per pound."

The able Havana (Cuba) *Post* has also been edifying its readers on the subject of rubber, as follows: "The rubber product of the *Siphonia caucha* tree, which is called Gutapercha, according to Mr. Charles Goodyear, has many applications in medical science, in machinery, submarine cables and telegraphy; substituting the other materials, as leather, whalebone, tortoise shell, ebony, etc.; rubber tires for cabs, automobiles, bicycles, and articles for ladies' use are made with this product."

THERE were exported from Great Britain during the first nine months of this year, 1,186,092 pairs of "Caoutchouc Boots and Shoes," of the value of £128,470 (= \$623,079).

RUBBER NOTES FROM EUROPE.

THE report of the Vereinigte Gummiwaaren-fabriken, Harburg-Wien, for the business year 1900-01, refers as follows to the recent strike in the company's factory at Harburg: "Unfortunately, the good will and harmony existing among our working-men since the factory began to exist, has been interrupted during the last year by a partial strike, that broke out on March 19 in our shoe department in Harburg. The same culminated in the proclamation of a general strike on May

BALANCE SHEET, JUNE 30, 1901.

VEREINIGTE GUMMIWAAREN FABRIKEN, HARBURG-WEIN.

ACTIVE.		PASSIVE.	
Fixed Property.....	M 2,749,981.38	Share Capital.....	M 6,000,000.
Land.....	847,698.68	First Emission.....	4,500,000.
Water Power.....	179,767.90	Second Emission.....	450,000.
Buildings.....	1,722,514.80	Third Emission.....	1,050,000.
Movable Property.....	1,702,914.82	Reserve Fund Account.....	3,101,865.
Machinery.....	1,361,751.50	Second Reserve Fund Account.....	375,250.44
Utensils and Furniture.....	341,193.38	Security Account:	
Material and Manufactured Goods..	4,094,703.49	Hypothecated for Bank Credit,	
Raw Material.....	2,887,583.42	not at present in use.....	450,000
Finished Goods.....	1,207,120.07	Dividend Account.....	7,545.
Cash, Bills of Exchange, and Effects.	358,896.70	Dividends outstanding, 1899-00.....	3,240
Cash.....	39,764.09	Dividends outstanding, 1900-01.....	4,305
Bills of Exchange in hand.....	307,591.79	Credits.....	2,003,128.09
Stock.....	21,540.82	Profit and Loss Account.....	1,513,842.64
Debits.....	4,095,134.78	Balance from 1899-1900.....	24,305.59
Total.....	M 13,001,631.17	Net profit for 1900-1901.....	1,489,537.05
		Total.....	M 13,001,631.17

10. As it was not a question of wages, but solely of power, we had to fight the strike most energetically, so as not to endanger the discipline in our works, and hence the profits of our business. We had the satisfaction that on June 17 the strike was declared off, without any proposals on the part of the workmen. Of course we have kept up our production during the strike, having enough hands willing to work upon the terms offered by ourselves, the latter figuring among the most favorable in our industry. We were enabled therefore to give satisfaction to our customers, supported as we were by our branch factories at Linden and Wimpasing, as well as by some of our competitors. Our principal customers, corporations and private, allowed for delays, that had become inevitable for deliveries by the conditions existing. We herewith express to them our thanks for their support and kind indulgence. At present we are working again satisfactorily at our Harburg works, and will hope that the deplorable consequences of the strike will serve as a lesson to our workmen, and that in the future the same good understanding with them may prevail that we enjoyed before, and that has been always aimed at by ourselves. In consequence of the strike we were obliged to build barracks in our Harburg works which since termination of the strike, are being used as canteens and dining rooms. At the same time we connected with them washrooms and baths for our employés."

—The Hamburg-American line of steamers, having already inaugurated a monthly service between Hamburg and Manáos, are reported to have decided to engage more fully in the carrying trade of the Amazon. They are said to have planned to place six new steamers on the Amazon, to run up-stream as far as Iquitos, in Peru, and also to place a floating dock at Pará. It is evident that the relative importance of the Amazon Steam Navigation Co., a British company, which at one time had a practical monopoly of the local Amazon trade, continues to decline—a result which is to be attributed mainly to bad management during the years when the possibility of competition seems not to have been thought of. One effect of the new German enterprise referred to above will be to promote the growth of Hamburg as a crude rubber market.

RUBBER PLANTING IN MANY LANDS.

PLANTATIONS LACOURT (CONGO FREE STATE.)

AMONG the Belgian enterprises exploiting rubber in the Congo Free State is the Société Anonyme Plantations Lacourt, founded in 1899 with a capital of 800,000 francs. The report of the company for the fiscal year ended March 31, 1901, devotes considerable space to their plantation of rubber creepers—one of the *Landolphia* species from which the Congo rubber is obtained. The rubber plantation embraces 355 hectares (=877 acres), on which 800,000 creepers have been set out. In cases where the first planting failed to give good results, new plants have been substituted. Some of the plants have reached a height of 3 meters within the first year, and all are now reported in good condition. The company's report quotes M. de Smet de Naeyer, president of the ministerial council of Belgium, as saying in the senate, on April 2 last, in regard to plantations in the Congo Free State:

"The steps taken for the replanting of Caoutchouc have caused the putting into nurseries or into permanent position of more than 3,000,000 rubber creepers, representing a value of 1,600,000 francs [= \$308,800]. The replanting of these creepers proceeds at the same rate as the exploitation of rubber,* which will have the effect of maintaining perpetually the ample native supply of rubber, notwithstanding its exploitation."

At the above rate of valuation the Lacourt plantation of 800,000 creepers would be worth 400,000 francs (= \$77,200), though in the judgment of the company this figure is much too low. The report of the company last year contained the following statement by their administrator-delegate:

"We know that the forests [in the Congo] most rich in Caoutchouc creepers do not on the average contain more than 5 plants per hectare [about 2 per acre]. We also know that under proper cultivation may be secured 2000 creepers per hectare [or 800 per acre.] Moreover, these creepers will produce, at the end of six or eight years, a minimum of 50 grams [about 1 3/4 ounces]. Allowing 20 per cent. deduction, for missing or sickly plants, the yield of one hectare would be 80 kilograms the first year [about 71 pounds per acre], and this would increase with the further growth of the plants."

These remarks are quoted in the current report, with the assertion that the rate of yield referred to can be looked for at the end of five years—or six, at the latest. Hence they should be able to gather, from their 355 hectares, in the sixth year, 32 tons of rubber of better quality, because better prepared, than the rubber now obtained from the natives, while continuing to trade in rubber with the natives.

The company have made experimental plantations of Pará and Ceará rubber, but their first effort with the *Castilloa elastica* was not successful, owing to the failure of the seed to germinate. They have planted also 148 acres of coffee, and smaller areas in cacao, vanilla, etc., besides food crops.

LOS ANDES RUBBER, LUMBER, AND FRUIT CO.

[Plantation: Motagua valley, Guatemala. Offices: London and Liverpool and Globe building, New Orleans, Louisiana.]

INCORPORATED under Louisiana laws; capital, \$100,000; to exploit 12,500 acres, on the railway between Morales and Los Andes, Guatemala. The cultivation of rubber is to be the main object, but, pending the development of the rubber, banana-

nas and other crops will be planted, and the lumber on the estate is to be marketed. There is also wild rubber on the property. Some rubber has been planted in this region, and the Los Andes company have contracted for young trees for next season's planting. It is expected, ultimately, to set out 450,000 rubber trees. The stockholders of the company are substantial business men of New Orleans. Charles Dickson is president, William J. Kearney vice president; Charles A. Schrieber treasurer, and George Montgomery, secretary. The general manager is H. J. Earle, of New Orleans, who of late has devoted much interest to Guatemalan interests. On October 17, the organization of the company and its plans having been completed, Mr. Earle started for Guatemala to take charge of the plantation. He had arranged to take 50 men from British Honduras, all additional laborers needed to be drawn from the vicinity of the estate.

MONARCH RUBBER PLANTATION CO.

MENTION was made in the September INDIA RUBBER WORLD [page 371] of the interest of President Harry E. Wagoner, of the Monarch Rubber Co. (St. Louis) and his associates in the company, in the prospects for rubber planting in Honduras. On September 26 they filed articles of incorporation, under Missouri laws, of a company with the name stated above. The declared purpose is the acquiring and cultivation of lands for the production of rubber, and for the purchase and control of vessels for the conveyance of products and supplies. The capital is \$150,000, divided into 200 shares of 7 per cent. preferred stock and 1300 shares of common stock. Each of the following holds 40 shares of preferred and 260 shares of common stock: Harry E. Wagoner, Edward H. Gorse, George H. Augustine, Roger Hayne, and Morris G. Levinson. The location of the plantation will be near the mouth of the Black river, on the northeastern Honduras coast.

BOSTON TROPICAL CO.

ARTICLES of incorporation were filed September 30, under Rhode Island laws, for the above company, with \$300,000 capital. The purpose is the growing of India-rubber, coffee, oranges, pineapples, and other tropical products, and the building and acquiring of boats needed in the company's business. The incorporators are William H. Chase and Alfred N. Litch, of Leominster, Massachusetts; Harry W. Barclay, of Newark, New Jersey; and Charles A. Deveraux, of Boston. The company will have an office at No. 17 Blagden street, Boston, and one at Providence, Rhode Island. A tract of 2500 acres has been secured on the isthmus of Tehuantepec, along the Solosuchie river, which leads to the port of Coatzacoalcas. It is planned to devote 1000 acres to rubber and as much more to coffee.

A PASTOR AS A RUBBER PLANTER.

SOME dissatisfaction is reported in the congregation of the Free Baptist Church, at Melrose, Massachusetts, regarding the alleged conduct of the pastor, the Rev. G. M. Howard. The church was organized eight years ago, through Mr. Howard's efforts, and an edifice erected on which there is still a debt. Rather than appeal to his congregation for more money, the pastor is said to have decided to go into some outside business, as a means of raising funds, and he chose rubber planting in Guatemala. According to the Boston Post, the estate selected is "La Gomora," 70 miles from Guatemala city, where many

*The law requires the planting of rubber to a certain extent for every ton of rubber exported from the Congo Free State.—THE EDITOR.

rubber trees have already been planted, with the idea of increasing the number to 1,000,000. The Rev. Mr. Howard is said to have been aided in forming his rubber company—reported to have \$500,000 capital—by the United States consul general in Guatemala, James C. McNally, a Pittsburg man. Meanwhile the church debt is embarrassing, no profits having been derived from the pastor's rubber plantation, and an investigation has been started.—In June last Consul General McNally, while visiting Boston, was quoted by the press of that city as being favorable to rubber planting, saying: "Gentlemen here in Boston I know have interested themselves in 10,000 acres of rubber lands in Guatemala," but he didn't refer to any church-debt-raising annex to the enterprise.

RUBBER LANDS AS AN INVESTMENT.

A GROUP of capitalists of Indianapolis and Pittsburgh have purchased a tract of 18,000 acres of rubber lands in the state of Oaxaca, Mexico, about three miles distant from the property of the Obispo Rubber Plantation Co. The parties referred to are understood not to be planning to plant rubber, but they have bought the lands as an investment, with the idea of not offering the same for sale within four years. Evidently their idea is that a substantial advance is in prospect for lands suited for rubber planting.

RUBBER TREES IN CUBA.

THE Havana *Post* states that Jose Gabriel del Castillo has growing on his plantation in Cuba hundreds of rubber trees, introduced from different countries, some of which are 65 years old. Also, that Martinez Castro, son in law of the proprietor of the Inglaterra Hotel, in Havana, who is interested in the plantation above named, is prepared to fill orders for young rubber plants.—THE INDIA RUBBER WORLD has received an inquiry for the addresses of persons who may be prepared to supply young rubber trees for planting in Cuba.

PARA RUBBER IN NORTH BORNEO.

HENRY WALKER, writing to the *British North Borneo Herald*, states that on May 28 he visited a plantation of Pará rubber trees, started in 1898 by W. E. Roberts, general manager of the North Borneo Trading Co., on the company's account. About 40,000 plants had been imported, of which 30,000 were living. The importation of seed had not been successful. Trees a little over 2½ years old were 7¼ inches in circumference, 3 feet above the ground, and some of them 20 to 25 feet high. A plantation of 4000 Kalapei Gutta-percha plants has been made by the same company. Their location is in the Seekong valley.

THE SAN PABLO CO.

[Estate near San Pablo, Mexico, on the railway to the Gulf coast. Offices: Marquette building, Chicago.]

THIS company has acquired a large tract of land, containing mahogany, cedar, and logwood, the marketing of which will be the first interest of the company. They expect later to plant various crops, and engage largely in grazing. They expect also to develop a rubber interest, beginning with the extraction of the native rubber and Chicle on their lands. Hilton M. Letts is the manager at San Pablo.

RUBBER PLANTING COMPANY PUBLICATIONS.

TABASCO Plantation Co., Minneapolis, Minnesota=[Prospectus] 32 pp.+map.

Tehuantepec Rubber and Commercial Co., Chicago=*Castilloa elastica*, 28 pp.

Aztec Plantation Co., Chicago=Quarterly Bulletin, No. 2—April, 1901. 4 pp.

The San Pablo Co., Marquette building, Chicago.=Report of H. M. Letts, Manager (on a visit to the company's lands in Mexico.)

YIELD OF THE PARA RUBBER TREE.

COMMENT was made in the last issue of THE INDIA RUBBER WORLD, on the paucity of data bearing upon the normal yield of rubber from the Amazon valley species which yield the so-called Pará grades. There have since come to hand some figures, compiled by a recent observer, which appear to be trustworthy, though they tend rather to confuse the matter, since they settle nothing beyond the fact that the rubber yield per tree in the Amazon country is most variable.

By the way, in the article published last month, the rubber tapping season was given at about 180 working days, and the calculations made in the article were based upon the idea that the trees were tapped daily during the season. The later information, however, brought from the upriver districts, is to the effect that the general practice is to tap the trees only on alternate days, so that each tree will be bled only about 90 to 100 times per season.

Figures collected on three important rubber estates give the following average yield of rubber per day, per *estrada* of 100 trees:

No. 1—On the Jurua.....	5 pounds.
No. 2—On the Acre.....	10 "
No. 3—On the Purus.....	16 "

Assuming that this average was maintained for 90 days, the annual yield per tree would be, according to the above figures, 4½ pounds, 9 pounds, and 14½ pounds, respectively. This wide difference in yield is accounted for by the fact that the estate first on the list has been closely "worked" for several years, the second for a shorter period, while the last mentioned has only been recently opened and the trees are still fresh. On the estate yielding only 5 pounds per day per *estrada*, it is now difficult to hire *seringueiros*, while on the more prolific properties all the help needed can be had without trouble.

We have also a report from an estate on the Purus, where 10 men collected last year 20,170 pounds of rubber, or 2017 pounds per man. The number of trees is not mentioned, or the length of the working season, but with 100 trees per *estrada*, tapped on alternate days, 90 times each per year, the result would be 22.4 pounds daily per man, and 10 pounds yearly per tree. Our informant insists that no business in gathering rubber could be carried on, based on a yield so small as estimated by the British vice consul at Manáos—Mr. Temple—of 1.1 to 3.3 pounds of cured rubber per tree per season.

"CASTILLOA ELASTICA" FROM CUTTINGS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have heard various opinions as to whether *Castilloa elastica* will grow from cuttings. My own experience is that planting from cuttings will be successful, though I have not planted from cuttings more than in an experimental way. A specimen is submitted herewith—the stalk of a six months' rubber seedling which was broken by accident and thrown down between the rows at the nursery in Jamaica, belonging to the South American Land and Exploration Co., Limited. The stalk took root without any further care—very strong evidence that *Castilloa elastica* can be established from cuttings where the conditions are favorable and moisture abundant. FRANCIS C. NICHOLAS.

New York, October 25, 1901.

[THE specimen referred to is well rooted, and apparently was as vigorous when finally taken up as a plant of the same age grown from the seed.—THE EDITOR.]

DEATH OF CHARLES L. JOHNSON.

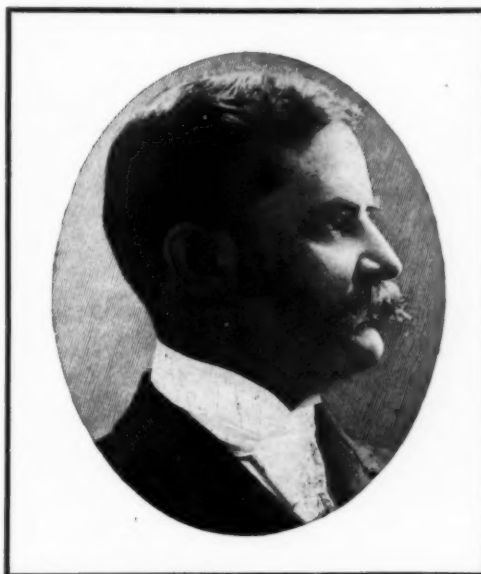
CHARLES L. JOHNSON, general manager and director in the United States Rubber Co., director and treasurer of The L. Candee & Co., and director in the Boston Rubber Shoe Co., American Rubber Co., Goodyear's India Rubber Glove Manufacturing Co., and Glenark Knitting Co., died at his home in New Rochelle, New York, on the afternoon of Tuesday, October 8. His death, which was exceedingly sudden, was due to an apoplectic stroke, a slight fore-runner of which manifested itself in an attack of vertigo and a fall a few days previously, and to which he attached but little importance. A second and more serious attack on the following Monday morning resulted in his death on the next afternoon. The end came peacefully and painlessly, with only a brief interval of consciousness after the second stroke.

Almost from his entrance into the rubber business in May, 1873, Mr. Johnson was a prominent figure in the rubber shoe trade. It is, therefore, interesting to review briefly the record of a life that has so suddenly terminated. Mr. Johnson was born at Ansonia, Connecticut, one of the most thriving places in the Naugatuck valley, on March 15, 1850. His father, David T. Johnson, was a well known constructor and builder, his reputation extending throughout the state. He was also a volunteer in the civil war, and at its close returned home a captain. Naturally the son, at that time fifteen years of age, sought a military career, and applied for appointment to West Point. In that, however, he was unsuccessful, but it is interesting to note that all through his life

Mr. Johnson kept up an interest in the army, and thought a military career an ideal one. At the age of 18 he entered the Sheffield Scientific School at Yale College, and was graduated in 1872 with high honors. That he was not only a brilliant scholar, but an exceedingly popular and entertaining young man, is proved by the fact that, for years after his graduation, when ever there was a class or society dinner, "Charlie" Johnson was always in demand to make the best and wittiest speech and to arrange in making the occasion in every way enjoyable. After his graduation, he served for a very short time as clerk in the Ansonia postoffice, in the meantime looking for something better, which came in the offer of a clerkship in the office of the Candee Rubber Co., in New Haven. Almost instantly Mr. Johnson made his mark in the Candee company. It seems that his rare business instinct grasped the details of the factory records so thoroughly, that he was able to inaugurate a new system that did away with a great amount of detail work. The company appreciating this, and other practical suggestions, elected him as secretary after he had been but one short year in their employ. Four years later he became treasurer of the

company, which office he held up to the day of his death. While residing in New Haven and filling the offices mentioned, Mr. Johnson familiarized himself with the manufacture of rubber shoes, and it therefore happened that when, in 1887, he assumed the general oversight of the selling of the Candee output and visited the general trade, he was remarkably fitted to understand and suit the wants of their customers. When, in 1892, the Candee company entered the United States Rubber Co., Mr. Johnson was elected a director in the larger company, and was also made its secretary and placed over the selling department, with the official title "Director in Charge of Sales." In 1898, feeling the strain of long continued work, he resigned, and took an extended trip abroad. His resignation as "Director in Charge of Sales," however, was not accepted, and he continued in charge of the selling department until the May election of the present year, when he was made general manager of the company.

Mr. Johnson's funeral was held at the Johnson homestead in Ansonia, on Saturday, October 12, at 1 P. M. The services were held in Christ (Episcopal) Church, preceded by a brief service at the home of his sister. The L. Candee & Co. closed its mills on the day of the funeral, and the New York and Boston offices of the United States Rubber Co. were open only for the transaction of necessary business. Prominent members of the rubber trade from all over the country attended the funeral, among them being all of the officers of the United States Rubber Co., the members of the executive committee, and many the directors. The honorary pall-



CHARLES LEWIS JOHNSON.

bearers were: President Samuel P. Colt, Vice President Lester Leland, Treasurer James B. Ford, Director Henry L. Hotchkiss, ex-Postmaster General Gary, George A. Lewis, ex-Secretary F. W. Holden, and A. H. Bartholomew. The acting pall-bearers were: H. M. Sadler, H. E. Sawyer, E. H. Paine, C. J. Pike, A. C. Coe, and J. M. Gallaway. Many other representative rubber men were there, among them being, President Walter S. Ballou, and E. R. Rice and C. W. Linthicum, of the Joseph Bannigan Rubber Co.; Messrs. Bliss and Hoadley of the Farrel Foundry and Machine Co.; Clinton Van Vliet, F. F. Schaffer, and W. T. Rodenbach of the Goodyear's India Rubber Glove Manufacturing Co.; Charles A. Coe, of Charles Coe & Co.; C. G. Ames, of The L. Candee & Co.; A. L. Comstock, of the American Rubber Co.; W. F. Mayo, of Mayo Brothers; H. H. Perrin, of the Tremont Rubber Co.; F. T. Comee, of the Woonsocket Rubber Co.; George C. Wetmore, W. C. McEnroe, John P. Lyons, G. S. Miller, and Henry C. Pearson, who attended as representative of the New England Rubber Club. The floral tokens arriving from all over the country, filled the house and church with a wealth of fragrance and blossom.

Mr. Johnson married, in Paris, in June, 1899, Miss Bertha Moorhouse—daughter of Mr. H. P. Moorhouse, for many years the representative of the Candee company in Paris—who survives him, with one son. Mr. Moorhouse happened to be in the United States, and was able to hasten to his daughter's side, at the time of her bereavement.

In forming a personal estimate of Mr. Johnson, one hesitates just where to begin, because of the wealth of material. He was a singularly broad man, intellectually, with a faculty for doing almost anything that he set himself to do, exceedingly well, while his scientific training rendered him accurate and his ambition energetic, these qualities being tempered by an exceeding courtesy and a recognition of their rights and abilities of others. Few men having climbed so high could have retained so many friends in so many different walks in life.

The New England Rubber Club, of which he was a member, called together their committee on receiving telegraphic news of his death and passed the following resolutions:

WHEREAS, Death has suddenly taken from among us our esteemed friend and fellow member, Charles L. Johnson, we, the members of the New England Rubber Club, are moved to record our sorrow, inadequately, yet sincerely in the following resolutions:

Resolved, That in the death of our friend the trade loses an able leader, a wise counselor, a friendly, courteous gentleman. Modest, intellectual, charitable, successful, his gentleness and consideration will render his a cherished memory.

Resolved, That we extend to his widow and his immediate family our deep and appreciative sympathy. Their grief is ours in a large measure, and while they miss him in the home, we also in the business circles, where strong ties are formed, and true respect and affection also dwell, shall on our part mourn and miss him.

Resolved, That a copy of these resolutions be spread upon the records of the Club, and also engrossed and presented to the family of the deceased.

A. O. BOURN

C. H. ARNOLD

GEORGE P. WHITMORE

} Committee.

RECENT RUBBER PATENTS.

UNITED STATES PATENT RECORD.

ISSUED SEPTEMBER 3, 1901.

NO. 681,758. Atomizer. Charles L. Turner, Malden, Massachusetts, assignor to Rhodes Lockwood, Boston.

682,012. Securing elastic tires to wheels. William F. Williams, London, England.

682,057. Cushion tire. Ernest Germain, Paris, France.

ISSUED SEPTEMBER 10, 1901.

682,160. Swimming bag. George B. Anderson, Philadelphia.

682,308. Rubber dam holder. Luther A. Young, St. Louis.

682,387. Elastic valve attachment for pneumatic tires. Rolland J. Peet, Hamilton, New York.

682,442. Elastic tire. William F. Williams, London, England.

682,464. Stopper for infants feeding bottles. Frederick R. Graham, Yoolil, Edinburgh, Scotland.

ISSUED SEPTEMBER 17, 1901.

682,633. Tire for vehicle wheels. William F. Masters, Brooklyn, New York.

682,789. Hoof pad. Charles S. Carlin, Keene, New Hampshire.

682,917. Tire. John M. Doan, Mishawaka, Indiana, assignor of one-half to Edward W. Synwolt, same place.

682,977. Resilient or elastic tire. Earnest A. Dibbens, Denver, Colorado, assignor to Charles G. Fawkes, same place.

ISSUED SEPTEMBER 24, 1901.

683,076. Bath hose. William L. Simmons, Chicago.

683,099. Syringe. Arthur E. Bonesteel, Central City, Colorado.

683,260. Life boat. John E. Dysart, Cadiz, Ohio.

683,318. Elastic horseshoe. Sidney McCloud, Chicago, Ill.

683,345. Cushion tire. Frederick W. Skinner, Valley Falls, Rhode Island, assignor to Advance Tire Co., of South Dakota.

683,365. Vehicle tire. William J. Wittmann, Rochester, New York.

DESIGN PATENTS.

35,064. Jar rubber. Florence C. Pulsifer, Port Huron, Michigan. Issued September 24, 1901.

ENGLISH PATENT RECORD.

APPLICATIONS.—1901.

16,745. Emmerich Markovitz, 18, Buckingham street, Strand, London. Improvements in tires. August 20.

16,749. Carlton Davies, 46, Lincoln's Inn Fields, London. Pneumatic tires and valve attachment thereof. August 20.

16,889. Baron Pierre De Caters, 45, Southampton buildings, Chancery lane, London. Pneumatic tires for vehicle wheels. August 22.

16,934. Frederick Wicks, Halfway lodge, Esher, Surrey. India rubber tires. August 23.

16,972. Albert Lambert Cudey, 53, Chancery lane, London. Pneumatic tires. August 23.

17,034. Hermann Gluer, Jr., and Wilhelm Taubenheim, 322, High Holborn, London. Mechanism for inflating vehicle tires during use and for indicating the attainment of the maximum pressure therein. August 24.

17,065. Richard John Hayes, Manchester. Pneumatic pad for trusses in the treatment of hernia. August 26.

17,239. Stanley Ingham, 9, Warwick court, Gray's Inn, London. Solid rubber tire for vehicles. August 28.

17,262. Georg Friederich Herbst, 37, Chancery lane, London. Elastic bracelets. August 28.

17,268. Harry Lucas, 18, Southampton buildings, Chancery lane, London. Valves for pneumatic tires and for similar services. August 28.

17,355. Edward Walton Marston, 55, Chancery lane, London. Valves for pneumatic tires and the like. August 29.

17,366. Charles Edward Lacy-Hulbert, 25, Victoria street, Westminster, London. Method of attaching rubber or other hose pipe to unions or fittings. August 30.

17,386. James Parr, 65, Friar lane, Leicester. Inflated and solid elastic tires. August 30.

17,505. John Joseph Connolly, 72, Cannon street, London. Pneumatic tires. August 31.

17,569. William Humphrey Wheatley, 40, Chancery lane, London. Improved exercising apparatus. [John S. Addleman, United States.] September 2.

17,591. Thomas Blandford, Corbridge-on-Tyne, Northumberland. Bicycle tire consisting of a flexible metallic tube with a covering of India rubber. September 3.

17,686. Harry Lucas and Thomas Sloper, 18, Southampton buildings, Chancery lane, London. Valves for pneumatic tires and similar services. September 4.

17,688. Charles Challiner, Manchester. Noiseless tires for vehicles. September 4.

17,862. Charles Edward Esse, 6, Lord street, Liverpool. Pneumatic inner tubes for tires. September 6.

PATENTS GRANTED.—APPLICATIONS OF 1900.

8367. Securing India-rubber to surfaces. Holroyd, J., Arncliffe, The Downs, Luton. May 5, 1901.

8515. Molding and vulcanizing India-rubber. Hamet, H., 34, rue Piat, Paris. May 8, 1901.

8567. Vulcanizing India-rubber. Same. May 9, 1901.

8603. Pneumatic tire. Feather, T., Mirfield, Yorkshire. May 10, 1901.

8626. Rubber tire. Boulton, A. J., 111, Hatton garden, London. [Thurston, E. L., Cleveland, Ohio, United States.] May 10, 1901.

8663. India-rubber cementing. Hamet, H., 34, rue Piat, Paris. May 10, 1901.

8851. Method of attaching tires to rim. Allison, C. A., 52, Chancery lane, London. [Strutt, W. H., and Reeves, A., No. 310 West One Hundred and Twenty-sixth street, New York, United States.] May 14, 1901.

9167. Molding and vulcanizing wheel tires. Doughty, H. J., Providence, Rhode Island, United States. May 18, 1901.

9222. Pneumatic tire. Collier, A. T., Convena, St. Albans, Hertfordshire. May 18, 1901.

9335. Rubber tire. Buckingham, E. J., 83A, St. George's road, Southwark, London. May 21, 1901.

9418. Tire repairer. Reynolds, A. G., 23, Stepney green, London. May 22, 1901.

MR. CANO AND THE "PACIFIC RUBBER CO."

TO THE EDITOR OF THE INDIA RUBBER WORLD: Having read under the head of "Pacific Rubber Co." in your issue of October 1 an anonymous card from some Brooklyn investors in said company's stock, with a very poor attempt at reply to the statements I made in my card and published in your issue of July 1, and to the subsequent confirmations and explanatory comments published in your issues of August 1 and September 1, I cannot see that they seriously traverse the several points stated by me—as matter of fact—in denouncing the falsehood of the so called United Securities Co.'s representations, the non-legal existence of the so called Pacific Rubber Co., and the unlawful use of my name and of a report I made on the property. As I informed you in June, the said property is still in my hands for sale.

As a general rule mere statements, even from the most reliable people, are not accepted, and intending investors of common sense and experience, first of all, must investigate on the plan, character, responsibility, financial standing of the company, and its ability to carry out contracts, and by no reasons depend solely upon the so called directors of a fictitious corporation, such as the "Pacific Rubber Co.," simply because they promise a profit unusually great.

To any one fully acquainted with rubber cultivation said profit is extravagantly absurd, and if the so called Pacific Rubber Co. has paid two dividends—July 5 and August 5—those dividends have come out of the money paid by the investors, and not from any income of wild rubber groves.

The Pacific Rubber Co. never has had such a thing as a charter, and are unlawfully using a corporate seal on their shares. The United Securities Co. with "Capital and surplus \$1,012,000," and the "Independent Match Co." of which George Surbrug appears as president and treasurer, are not registered at New York, or mentioned in the City Directory.

Furthermore, under the New York corporation law, directors of a corporation make themselves liable: By making any report, certificate, or public notice that is false in any material feature; the officers and directors signing the same shall, if any loss or damage ensue therefrom, be personally liable to any person who becomes a creditor or stockholder upon the faith thereof. By declaring dividends, *except from surplus profits*; or dividing, withdrawing, or paying out any part of the capital to any of the stockholders.

The "Pacific Rubber Co." since June last, have been unable to give full details regarding the location of the 30,000 acres of the vast, wild groves with rubber trees yielding from 20 to 30 pounds of rubber gum each; have been unable to show the title free of all encumbrance by which they really own said property; have been unable to give the names of the parties in Mexico or elsewhere stated to be or to have control of the plantation, and to show even the smallest importation of rubber gum out of the 60,000 pounds they so boastingly pretend to get. So, still to-day there is absolutely nothing to show their legal standing, character, and financial responsibility, and the whole business is nothing but a fraud.

Besides, the said Pacific Rubber Co., by itself and not by means of anonymous investors, is the one to protest against my statements, and by proper procedure to show themselves blameless; but they are unable to do it so, for, not having complied with the law, they cannot maintain any action in the state courts. My representative is now in New York, and will take such steps as may be required by law to sue and stop those people from the further use of my name. CHAS. G. CANO.

East Oakland, Cal., October 10, 1901.

NEW TRADE PUBLICATIONS.

THE COMBINATION RUBBER AND BELTING CO. (Bloomfield, New Jersey), successors to the Combination Roll and Rubber Co., have issued an extensive catalogue of "Vulcanized Rubber Goods," including especially those adapted to mechanical purposes. The company control various special processes, particularly that for making their "Indestructene" rubber belting. The book contains considerable information of value in regard to rubber belting and hose, together with a catalogue of mechanical rubber goods in general, molded specialties, etc., including illustrations and prices. [5"×7½". 84 pages.]

B. F. STURTEVANT CO.'S (Boston) Catalogue No. 117 relates to "The Sturtevant Electric Motors, Generators, and Generating Sets." Having first gained a worldwide reputation as blower manufacturers, they have found some special effort necessary to impress the public with the corresponding magnitude of their business in the electric field. The catalogue referred to here, however, should be sufficient evidence that the Sturtevant company are fully equipped to meet any requirements in the way of moderate sized motors, generators and generating sets. Catalogue No. 117 is even handsomer than the Sturtevant standard. It is illustrated effectively, contains advice of value to intending buyers of motors, and gives prices. [9"×6½". 49 pages.]

WELLMAN SOLE CUTTING MACHINE CO. (Medford, Massachusetts) issue a new publication—"C 1901"—relative to their machines, of which one is for cutting taps and the other for cutting all kinds of soles, whether plain or embossed, large or small. There are eleven pages of plates, illustrating all the various parts of these machines, followed by descriptive matter and directions for ordering, the object of the whole being to make it easy for the company's customers to order whole machines, or parts, as desired. A price list is included. [9"×11¼". 20 pages.]

THE B. F. GOODRICH CO. (Akron, Ohio) issue a brochure entitled "The Pickett All Rubber Valve," pointing out its adaptability for pneumatic tires, air cushions, pillows, punching bags, and football bladders, with illustrations of the form and method of attaching this valve—details which have appeared already in THE INDIA RUBBER WORLD. [3½"×6". 6 pages.]

THE VICTOR RUBBER CO. (Springfield, Ohio) issue an illustrated catalogue of "Mats, Matting, and Specialties for the Carriage Trade," showing a wide variety of designs, and giving prices. [3½"×6¼". 12 pages.]

BOSTON WOVEN HOSE AND RUBBER CO. issue a "Garden Hose Catalogue" for 1902, embracing ten brands in rubber and four in cotton hose, together with a varied line of hose appliances, the booklet being suitably illustrated. [8"×5½". 20 pages.]

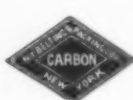
ALSO RECEIVED.

PNEUMATIC Mattress and Cushion Co., New York.—Pneumatic Mattresses, Pillows, Cushions, etc. 16 pp.

Morse, Williams & Co., Philadelphia.—Belt Power Elevators. 24 pp.
P. Goldsmith's Sons, Cincinnati, Ohio.—Sporting Goods [including striking bags and footballs with new patented rubber bladders]. Catalogue No. 38—Fall of 1901. 28 pp.

The La Favorite Rubber Manufacturing Co., Paterson, New Jersey.—Brown Packings. 4 pp.

Quaker City Rubber Co., No. 409 Market street, Philadelphia.—Garden Hose. Daniels' P. P. Patented Rod Packing. Lawn Hose Reels. [Series of folders.]



RUBBER GOODS

Our three brands,—single, double and triple diamond,—correspond to three qualities. A single diamond means "Carbon" grade—a good article; a double diamond means "Double Diamond" grade—a fine article; a triple diamond means "1846 Para" grade—a splendid article and the best we can make. Our brands on hose, belting, packing

*Belting,
Garden Hose,
Water Hose,
Fire Hose,
Suction Hose,
Steam Hose,
Air Hose,
Tubing,
Rod Packing,*

and other rubber goods are guarantees of high quality and long service.

Chicago,150 Lake St.
St. Louis,411 No. Third St.
San Francisco, 509 Market St.
Boston,24 Summer St.
Philadelphia, 724 Chestnut St.

*C. I. Packing,
Rubber Packing,
Gaskets,
Valves,
Rubber Tiling,
Rubber Matting,
Emery Wheels,
Specialties,
Vehicle Tires.*

NEW YORK BELTING & PACKING CO. LTD

PIONEERS AND LEADERS—25 PARK PLACE, NEW YORK.

Mention The India Rubber World when you write.

ECCE SIGNUM.



THOROUGHLY RELIABLE.

The policy of furnishing only the finest goods that can be produced with perfect materials, latest and best machinery, and highly skilled workmen of long experience, has been, is now, and will continue to be, the policy of

The Mechanical Rubber Company, CHICAGO, ILL.

Branch Store, No. 1810 Blake Street, Denver, Colo., where we carry a full line of goods.

Manufacturers of all kinds of rubber goods for mechanical uses—Hose, Belting, Packing, Gaskets, Bicycle Tires, Specialties, Moulded Goods, Etc., Etc.

If you are unable to satisfy your trade with goods you are supplying,
If you are in search of good goods at fair prices,
If you cannot get quick deliveries,
If you are not getting fair value for your money,
IN ANY EVENT,

SEND TO US FOR SAMPLES AND
QUOTATIONS.
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THE MECHANICAL RUBBER CO., 230 Randolph St., Chicago, Ill.

Mention the India Rubber World when you write

A REVOLUTION IN THE MANUFACTURE OF RUBBER FOOTWEAR.

FOR several months obscure rumors have floated about the rubber shoe trade relative to a new method of manufacture. In spite of the fact that these rumors were persistent, no one seemed to be able to gain explicit information. Indeed, it is probable that most hearers dismissed them as of no value. That they had a good foundation, indeed, that an absolute revolution in the manufacture of rubber footwear has been accomplished is the fact.

To begin at the beginning of the story, one should review several years, that were filled with experiment and investigation on lines wholly original, and that from the first gave great promise. Not to follow the work of those years in detail, it is enough to say that, less than a twelve-month ago, the first machine for making and vulcanizing a stockinet lined rubber shoe was constructed. To-day, both machine and process are perfected, and turning out a product that noted shoe experts, American and foreign, after the most critical examination and investigation, pronounce unrivalled in style, finish, and durability.

In order to understand clearly what the new process accomplishes, it is well to glance at the methods by which rubber footwear is now made, as well as at the finished product. Beginning backward, the standard product to-day is far from satisfactory. In the words of one rubber expert: "The best rubber shoe as made to-day is a pasted, uncouth abortion, its lines hardly twice alike, its surface covered with an oilcloth varnish, and nearly every process of its manufacture marked by the clumsy methods of the middle ages." This is severe, and at first blush seems hardly fair to those who have worked so hard to perfect their product in the old way. But it is true. There has been progress in style, and in the production of lighter and trimmer goods, but that is about all. With a gum like India-rubber that lends itself to any shaping and to any finish, the shoe to-day is far from perfect. To be sure, the writer did not see this clearly until this shoe was shown him, and he begs his readers to wait until they themselves see it, before doubting his judgment in the matter.

Reviewing then the present process of manufacture, it will be admitted that the washing, drying, and mixing, as they are done to-day, may be improved, but are not likely to be done away with or revolutionized. So far so good. But the sheet, upper, soling and friction calenders offer a field for economy, the vulnerable points being the upper and soleing calenders. The cutting room with its racks, its hand work, its great spaces and its booking, is another weak spot. Then the making-up rooms, the costly equipment of tables, racks, cars, and tracks, and the endless hand work have long vexed the soul of the manufacturer. So too with the use of cement—no other part of the rubber industry, but would consider it a burden and a waste. Then comes the vexed question of wooden lasts

and boot trees, one of the most costly items, ever shrinking, burning, chipping, and upsetting patterns, until exact sizes are an impossibility. Nor is this all—for the linseed oil varnish is but a delusion and a snare. And last comes the long dry heat, injuring the fine lines of the "stitcher" and the expert worker, tying up cart loads of lasts, demanding far too much room, too much heat, and forever an unknown quantity when it comes to exact regulation.

One of the first requisites in a trade revolution is the cheapening of the cost of manufacture. Estimated conservatively, by this process, a shoe can be made at 40 per cent. less cost than the same type of shoe made by the present process. Incidentally, it may be well to mention here that the new shoe put on the market by the side of the best of to-day's product, will sell for 20 per cent. more, this being the estimate of one of the largest jobbers in the United States.

A second consideration is the initial mechanical equipment, which is cut down more than one-half, while the floor space required is cut down 80 per cent.

A third and most important point, relates to the quality of stock needed to turn out a perfect shoe. Exhaustive tests have demonstrated that, under this process, a much cheaper compound can be used and give a better product, both for finish and for wear, than is possible by using the seven hour dry heat.

Again, taking shoes of a given size and style, there will be absolutely no variation if millions of pairs are made from the very simple model that the machine calls for. Still further, one man can complete a finished, vulcanized, shoe a minute, and do it day in and day out. And lastly, any type of footwear, from the lightest ladies' goods to lumbermen's overs, arctics, and boots, can be turned out with facility and almost absolute freedom from "seconds" or faults.

The machine, which is so small that the operator can reach any part of it from his post, is a marvel of compactness and effectiveness. It lines the shoe with any material with perfect smoothness, and the most delicate fabric on the inside or outside, is neither weakened, stained, nor marred by any part of the process. It also opens a broad field for new and artistic designs never before possible. The finished shoe is not varnished at all, but comes out of the machine jet black, as smooth as glass, and with a permanent surface polish.

The machines and processes, by the way, are completely covered by patents in the United States and foreign countries, and eminent patent attorneys have pronounced them to be unassailable. A company has been organized with a capital of ten million dollars to manufacture rubber boots and shoes under these patents and processes controlled by Mr. Joseph O. Stokes, a well known and successful manufacturer of general mechanical rubber goods.

SOME NEW LAWN SPRINKLERS.

THE approach of the season for placing orders for lawn sprinklers for next season's trade is made the occasion for the announcement by the W. D. Allen Manufacturing Co. (Chicago) that they have been again at work during the past year on goods in this line, having secured patents meanwhile on three new sprinklers. The firm referred to are the largest

manufacturers of lawn sprinklers, and their list of products to-day embraces something for about every possible situation where a lawn sprinkler can be used.

Three of the styles made by this firm—the *Hartford*, *Garden City*, and *Busy*—are adaptations of the Blake sprinkler. Being of the revolving spoon type, the Blake sprinkler possesses the great merit of not retarding the flow of

water in any respect. The Blake sprinkler can be attached to the end of the hose, and the volume of water discharged is about $\frac{1}{8}$ inch in diameter, so that probably more water can be distributed through the Blake sprinkler than through any other. At any rate, this is becoming a popular form of lawn sprinkling devices, among its advantages being the fact that it does not clog should there be any sand or dirt in the water, and the water is distributed freely. As above stated, the *Hartford*, *Garden City*, and *Busy* are simply different adaptations of this sprinkler, the result obtained being the same in each case.

The *Sunshine* and *Pluvius* sprinklers operate on a new principle, being ball bearing. For this form of sprinkler the firm have secured letters patent. The principal advantage of this construction is that the sprinkler revolves with very light pressure. It has been found that the

sprinkler arms will revolve with the weight of the water in the hose, provided the hose is lifted to a height of 5 or 6 feet. The force of pressure will cause the sprinkler to revolve gently as long as there is any water in the hose to flow. The advantages claimed for this form of sprinkler are two: (1) it revolves so easily that it will throw water further than a similar sprinkler will which is not ball bearing, and (2) it revolves with such slight pressure that it will cover a small surface if desired. The radius of the circle of the old style sprinkler could never be reduced sufficiently to sprinkle a lawn and not cover the

sidewalk, but the *Sunshine* and *Pluvius* sprinklers can be so handled as to distribute water over a circle only 4 feet in diameter, if necessary. There is no other sprinkler made of this type which revolves so easily, or which is capable of the same



No. 6.



No. 4.



No. 2.

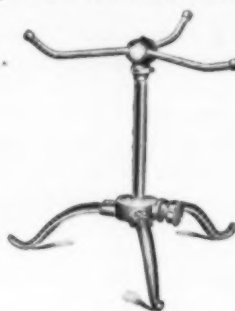
HARTFORD SPRINKLER.



GARDEN CITY.



BUSY.



SUNSHINE.



PLUVIUS.

variety of changes. These sprinklers have been reduced in price considerably.

The *New Preston* sprinkler embodies a change in the form of sprinkler formerly made by the E. B. Preston Co., which renders it more effective and more graceful in appearance. The "Preston" was always regarded as a good sprinkler and it is expected that the changes will render it more popular.



NEW PRESTON.



CYCLONE.

The *Cyclone* sprinkler is an adaptation of the old "Columbia," which also was made for many years by The E. B. Preston Co. It is simply the "Columbia" sprinkler on a sled. The tendency in lawn sprinklers of this class is towards putting them on sleds, the obvious advantage being that they can be dragged over the lawn simply by pulling on the hose.

The *Dandy* sprinkler is the subject of the latest patent gotten out by the W. D. Allen Manufacturing Co. It consists of a spray nozzle screwed onto a sled. In connection with the sled it is used as a lawn sprinkler. When a nozzle is wanted, the nozzle part is unscrewed from the sled and attached to the hose, and when the buyer secures one of these articles he has (1) a lawn sprinkler, and (2) a spray nozzle combined in one. The price is moderate; in fact, it is the object of the manufacturers to make sprinklers at popular prices this year.



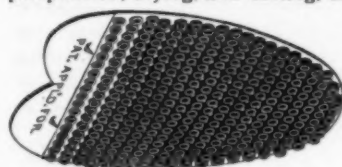
DANDY.

WHAT remains of the assets and business of the Rubber Estates of Pará, Limited, which company was floated in England some three years ago with a large capital to acquire the rubber estates of the Visconde dos Domingos, near Pará, has passed under the control of the Brazilian Rubber Trust, Limited, registered in London on September 28, with £37,000 capital.

NEW GOODS AND SPECIALTIES IN RUBBER.

BAILEY'S NEW HEEL CUSHION.

THE true inventor is a man who wrestles with a problem until it is solved, and that to the satisfaction of all concerned. Bailey's first heel cushion, which was a good one, had the rubber set on a neat piece of leather. This was found objectionable later, as the leather, absorbing perspiration, drying, and curling, drew out the two tiny tacks



that hold the cushion in place. Celluloid, therefore, replaced the leather but this proved to be so springy that the tacks often jumped out. Mr. Bailey then put on his

thinking cap and soon evolved the present heel cushion, which appears perfect. The rubber is attached to a thick piece of felt. The tacks are buried out of sight, the felt next to the wearer's foot is most comfortable and is in itself an elastic cushion, while underneath is the rubber molded in the shape shown in the illustration, forming a light indestructible cushion for the heel. [C. J. Bailey & Co., No. 22 Boylston street, Boston.]

JOHNSON'S ACCIDENT CASE.

THE liability of every one to accidents of some kind, whether when traveling or at home, has suggested the desirability of having in readiness an outfit of appliances and materials adapted for immediate use for wounds and bruises. If every man cannot carry such an outfit around with him, it is de-



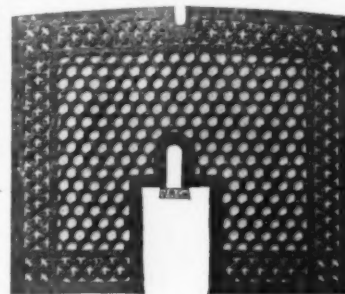
sirable at least to know that they are coming to be kept on sale generally, and while the contents of such a case as is illustrated herewith embrace but little rubber, the case properly belongs in every stock of druggists' sundries. Besides, rubber men are no less liable than the generality of mankind to accidental injuries, and may be supposed to be as much interested as anybody else in the provision made for first aid. The case here illustrated is 15x6x8½ inches in size, strongly made, and waterproof, with hinged cover. Inside are packed—each article in its proper place—an assortment of bandages, ligatures, lint, adhesive plaster, surgeon's soap, absorbent cotton, anti-

septic tablets, and the like, together with a copy of Johnson's "First Aid Manual," containing advice for treating various forms of injury, and instructions for using the various materials above referred to.—This case contains three of Johnson's "First Aid Packets," with a small outfit of bandages and anti-septic materials. It is mentioned that in the recent Cuban campaign the United States government supplied 370,000 of these packets to the army and navy. The articles, together with a variety of rubber plasters, are manufactured by Johnson & Johnson, New Brunswick, New Jersey.

AUTOMOBILE MAT.

THE wide extent to which automobiles have come into use has lead to a demand for shapes and patterns of rubber mats specially adapted for such vehicles and different from anything hitherto on the market.

In very many cases mats of irregular shape are required, and such must be made to order. The demand in this line is for mats made of good stock, and such mats should outlast the vehicle to which they are fitted. Several of the rubber companies exhibiting tires at the carriage shows last month gave a prominent space in their displays to rubber mats, including The Victor Rubber Co. (Springfield, Ohio), one of whose designs is reproduced in the accompanying illustration.



BROOKE "AIRLESS PNEUMATIC" TIRE.

THE internal construction of this tire, as indicated by the illustration herewith, is a core of India rubber, constructed with a view to affording resiliency, without the tire being liable to injury from puncture. In the words of the inventor, M. E. Brooke, it "produces riding qualities similar to a pneumatic tire." The tire is manufactured in lengths, which can be cut to fit wheels of any diameter. It is attached to the wheel by wires, and may also be reinforced by bolts through the felloe. Of course no pump is required. It is stated that a 1½ inch of this type will work satisfactorily when used on 1¼ inch solid tire crescent rims.—This tire is controlled by the Brooke Airless Pneumatic Tire Co. (Denver, Colorado), incorporated under Colorado laws in January last, and of which the Mr. Brooke mentioned above is general manager.



MORRIS SPRING BOTTOM DUCK BASKETS.

THESE baskets, made on a design for which patents are pending, are offered to the trade as possessing the qualities that make a desirable mill basket, especially strength, lightness, durability, ease of handling, and in addition an elasticity that reduces to a minimum the breakage of articles thrown into them. They are constructed of spring steel frames and specially woven heavy cotton duck, on designs which have been tested with great care. The joints are all smooth, without burrs, lumps, or ridges to wear or cut the duck covering. The

larger of the two cuts shows a complete basket, the bottom of which, composed of duck bands, is from 1½ to 2 inches from



the floor, allowing the basket to be moved easily from place to place on the steel runners. The covering consists of one piece of duck, folded without seams, and resting on the bands within the frame. The covering is put on under considerable tension and thor-

oughly secured with twine and rivets; besides which the baskets are hooped with duck bands and reinforced at all wearing points. There is nowhere any hard surface for the goods to

come in contact with and cause breakage or damage. The smaller cut shows a round basket, and a view of the bottom construction common to all the various shapes in which these baskets are made. They are designed for rubber, textile, knitting, and bobbin factories, stores, express companies, etc. The manufacturers are in receipt of very



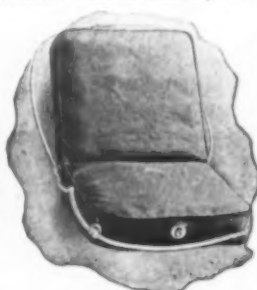
encouraging letters: "The best basket we ever had in our mills," "Would not know how to do without them," etc. [Morris & Co., Yardville, New Jersey.]

AN AIR MATTRESS WITH "STAYS."

An air mattress without stays is liable to bulge into hillocks and hollows. Many inventors have devised stays intended to prevent this bulging, but what they have produced has proved in most cases either clumsy, or weak, or otherwise unsatisfactory. But one inventor, A. A. Young, made a stay for a pneumatic cushion that goes through to the outer sides, fastening there to a wooden button, with concave under surface, which is vulcanized to the rubber webbing of the mattress. Over the button a cap of rubber webbing is fastened and vulcanized, in-



"PEERLESS."



"BUTLER."

sureing a thoroughly air tight mattress or cushion, with the strain on the outside. The air sack, in the cushions made under Mr. Young's patent, is protected by a covering of ticking or brown duck. These cushions are made in styles for use on ships and yachts—they are in use on the "American Line" steamers and some United States naval vessels—for camp use, automobile cushions, chair cushions, hospital beds, and for ordinary household use. [Pneumatic Mattress and Cushion Co., Nos. 23 South street, New York.]

THE RUBBER TRADE IN CHICAGO.

BY A REGULAR CORRESPONDENT.

THE distribution of garden hose during the past summer was so general throughout the middle west—because of the early and protracted drouth—that the stock in retailers' hands was probably left smaller than for many years, and indications are that a very heavy business will be done by manufacturers and jobbers this fall and winter for next season's supply. It does seem, however, that the manufacturers would serve their own interests better if they held prices on the lower grades of hose at a point which would enable them to make hose on which they would not have such a large percentage of defective hose returned. But judging from prices at which some large contracts have already been taken, with guarantees for quite heavy pressures, a lower range of prices is being made than would appear to be comfortable.

The distribution of belting, particularly in the higher grades, has been large, and generally satisfactory.

John M. Moulton & Co. have let the contract for belting for a grain elevator they will build in 1902, for the West Shore railroad at Weehawken, New Jersey, to the Diamond Rubber Co. (Akron, Ohio.) There are three more large elevator belting contracts which will shortly be out, for which the competition doubtless will be as keen as it was for the ones recently placed. This lot of belting referred to will not weigh less than 60,000 pounds.

The vehicle and bicycle tire business has been very satisfactory, as far as volume goes, and while prices are still pretty close, it is to be presumed they are fairly remunerative for the manufacturers.

Rubber horseshoes, of which the styles are bewilderingly numerous, are growing more and more in favor, and the outlook is for a large business this coming season. Rubber heels also hold their own and seem to have established themselves as a necessity, and not as a fad.

The severe and protracted drouth in the early summer in the middle west and northwest, was the cause of a great deal of cancellations in the rubber boot and shoe trade; but on the whole distribution has been very satisfactory, and well ahead of last year. Doubtless jobbers as well as retailers would like to see the very fine weather we have been having come to an end.

The distribution of druggists' sundries continues very satisfactory, and hard rubber combs are having an extensive sale. In hard rubber goods, the demand for battery jars is constantly increasing, and the distribution of sheet, rod, and tubing is large. *Papier maché* composition seems to be getting a considerable share of the telephone specialties, such as receiver shells, mouth-pieces, etc., but hard rubber gets the big end of the business, and a very large one it is.

There is a good field in Chicago for a hard rubber turner. There must go out of Chicago to New York \$300 or \$400 worth of work every month from surgical instrument houses for such specialties as ear trumpet pieces and the like. Not enough of any one article is bought to justify the cost of dies and molds and hence these things are all "turned" from tubing.

The business in fire hose is very good indeed; one house reports having more orders than they can fill.

The formation of another rubber plantation company here is reported, with 21,000 acres of land in the state of Chiapas, Mexico. Particulars will probably be forthcoming by next issue. From the character of the men in charge, and also the favorable location of its land, this promises to be one of the very successful companies.

NEWS OF THE AMERICAN RUBBER TRADE.

GOING TO NIAGARA TO RECLAIM RUBBER.

THE United States Rubber Reclaiming Works have taken an important step, looking both to the extension of their facilities for work, and to the future remodeling of their business, by securing premises at Buffalo, New York, where advantage will be taken of electrical power from Niagara Falls. The property acquired consists of $2\frac{3}{4}$ acres, bounded by three principal streets, the most important of which is Babcock, the location being about 12 minutes by trolley car from the courthouse. On the ground there is already a $3\frac{1}{2}$ story building, of good construction, 185x85 feet, with adjacent sheds, suited, with some alterations now in progress, for the reception of a reclaiming plant. A contract has been entered into with the Cataract Power and Conduit Co. for electrical power, and orders placed for 5 induction motors, alternating current, having a combined capacity of 1500 horse power. The steam plant, for use in devulcanization, will consist of boilers aggregating 200 horse power. The machinery needed for the reclaiming plant, also under order, will be of the latest type, and special study has been given to planning the most convenient and economical installation of the same. In addition to the advantages expected from model equipment, and the saving in cost of power as compared with steam, an important saving in freight charges is assured, from the fact that a large part of the raw material used is gained from the West—Chicago being a center of the trade in scrap rubber—and water transportation will be available, at low rates. It is expected that the Buffalo plant will be in operation by the beginning of March. In time the company's Jersey City plant, established about 1883, will be consolidated with that at Buffalo, but the present plans do not look to the abandonment of the important works at Shelton, Connecticut, which occupy a convenient relation to the rubber industry of New England.

DIAMOND RUBBER CO. (AKRON, OHIO.)

THE annual meeting of this company was held on October 16, when the directors and officers were reelected. While no official financial statement has been given out, it is common report that the past year's earnings have been most satisfactory, which may explain, says an Akron newspaper, "why one of its stockholders offered recently to pay over \$50,000 for a block worth \$20,000 at par."

GOOD CONTRACTS FOR ELEVATOR BELTING.

THE Boston Woven Hose and Rubber Co. have secured the contract for the rubber belting required for the new Grand Trunk grain elevator at Portland, Maine, the specifications for which appeared in the last INDIA RUBBER WORLD [page 23.] The same company also recently secured a contract for supplying the belting for the Illinois Central Railway elevator at New Orleans, for which the George B. Swift Co. (Chicago) are the contractors.

THE RUBBER STOCK THAT MAGOWAN SOLD.

THE court of chancery at Trenton, New Jersey, on October 4, granted an injunction restraining William H. Skirm from in any wise disposing of 1048 shares of Empire Rubber Co. stock, about which there has been much litigation. The action of the court is taken in the suit of John E. Clancy, receiver of the old Empire company, against Frank A. Magowan and others, and the court holds that the stock in question must not be disposed of until the affairs of Magowan have been brought to a

final accounting. Mr. Skirm claims title to the 1048 shares by purchase at a sheriff's sale, in June, 1897, of Magowan's interest in this stock, for \$30. The validity of this title is attacked by the complainant on the ground that Messrs. Skirm and Magowan concealed the amount of the actual claim against this stock and so prevented *bona fide* bidders from purchasing it.

CALUMET TIRE RUBBER CO. (CHICAGO).

THE Calumet company are largely increasing their facilities. They have erected an entirely new plant as an addition to their original one, in which there are duplicates of all the machinery already in use, together with a large variety of new machinery, much of which is patented, some of which is operated under a secret process for the manufacture of general mechanical goods. The company's specialty will continue to be vehicle tires, to which they plan to pay even more attention in the future than they have in the past, both as regards variety of makes and superiority of product.

EASTERN AGENCY OF THE MAHONING.

WILLIS A. DARLING who, since 1876 has been actively interested in the making of mechanical rubber goods, and who is accounted one of the most successful and popular salesmen in that line, has accepted the position as sales agent for the Atlantic states for the Mahoning Rubber Manufacturing Co. (Youngstown, Ohio.) Mr. Darling will have offices in New York and Boston, and will also carry a stock of goods in each center.

GOLD MEDAL FOR EUREKA FIRE HOSE.

THE Eureka Fire Hose Co. (No. 13 Barclay street, New York) have been awarded a gold medal at the Pan American Exposition, covering their noted brands of fire hose, "Eureka," "Paragon," and "Red Cross"; also, for hydraulic hose for all purposes, linen hose, and tubular fabrics. There is no question as to the popularity of the company's products.

THE CAPE NOME CABLE NOT DAMAGED.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I wish you would kindly contradict the notice mentioned in your issue of this month regarding the Nome cable being a failure. Having manufactured and laid this cable, I hereby state that the same is in perfect working order, and has been since August 20, the last report being through Mr. Sloss, of the Alaska Commercial Co.; also Major Green of the Signal Corps, U. S. A., at St. Michael, Alaska. Yours truly,

W. R. BRIXEY.

No. 203 Broadway, New York, October 2, 1901.

THE report here referred to [October issue—page 22] was published as having appeared in the newspapers late in September. Mr. Brixey has our thanks for his correction.

B. F. STURTEVANT CO. (BOSTON.)

WORK is now under way upon the foundations for the immense new plant of this company, at Hyde Park, Massachusetts. That the buildings can be completed none too soon for the urgent needs of the company is evidenced by the fact that their present plant at Jamaica Plain is now taxed to the limit and that it has been necessary to run overtime, particularly in the engine and electrical departments.—Prof. R. A. Smart has resigned his position in the department of experimental engineering of Purdue University (La Fayette, Indiana) and connected himself with B. F. Sturtevant Co., with whom he will become the head of a department of experimental en-

gineering which is being established for the purpose of investigating all problems relating to blower practice and of developing new and more efficient applications of the fan blower in all lines of industry.

A NEW RUBBER RECLAIMING COMPANY.

A NEW incorporation, under the laws of New Jersey with \$60,000 capital paid-in, is that of the Pequannoc Rubber Co., with factory, and general offices at Butler, N. J. The active spirits of the company are Mr. Joseph F. McLean, president and general manager, and Mr. Charles J. Trent, secretary and superintendent. The former of these gentlemen has been, for twenty years, actively engaged in the rubber business. He is well known in New Jersey, being treasurer of Morris county, and bears an excellent reputation as an enterprising and capable business man. Mr. Trent has been, for some fourteen years past, superintendent of the Bloomingdale Soft Rubber Works, and is known as a skillful and conservative superintendent, and one who understands the manufacture of reclaimed rubber in all its branches. The plant has been fully equipped with the latest machinery for the manufacture of mechanical reclaimed rubber. The new company already have assurances of good contracts and are putting on the market only the best grades of goods. The management of the concern fully appreciate the necessity of an absolutely pure and reliable product and their long experience in the rubber business has shown them the importance of uniformity and reliability in reclaimed rubbers.

THE SCRAP RUBBER MARKET

THE prices at which transactions in scrap rubber have been closed, during the past month, are somewhat higher than the rates which ruled during the summer, which is due to the increased activity of consumers. The latest quotations supplied in New York are 8½ @ 8½ cents per pound for old shoes, in car-load lots. Foreign stock is quoted at 6½ @ 7 cents. Reference has been made in these columns to sales of foreign scrap abroad at relatively higher prices than American quotations for goods of this class, but from the continued liberal rate of importations of scrap from Europe, it would appear that the principal market for scrap of transatlantic origin remains in the United States. An indication of the demand here for foreign scrap may be found in the fact that two advertisements in THE INDIA RUBBER WORLD recently, offering foreign scrap to the American trade, were answered by nearly every house in this line.

A FACTORY SPREADING OUT.

THE Goodyear Tire and Rubber Co. (Akron, Ohio) have recently moved into a large brick office building which it erected during the past summer. The former quarters were too small, but now make room for a spreading out of the factory departments. The company are erecting a three-story addition on land recently acquired from the city and, it is rumored, will add a line of soft rubber specialties to its output about midwinter.

THE LAST OF THE ÆTNA RUBBER MILLS.

SOME little time after the death of C. M. Clapp, the well known plant of the Ætina Rubber Mills, at Jamaica Plain, Massachusetts, was partially destroyed by fire. The plant was never again used as a rubber factory, but was utilized by a local carpenter as a storehouse for lumber and building materials. On September 20 the mill again took fire, when it was totally destroyed.

DEATH OF MAX T. ROSEN.

MAX T. ROSEN, who, with his wife and daughter, was returning from a trip to Europe on the steamship *Deutschland*, which reached New York on October 24, died on that vessel on the 20th, of heart failure. His body was brought home and interred at Woodlawn cemetery on October 27. Mr. Rosen was 55 years old, and was secretary and a director of the U. S. Rubber Reclaiming Works (No. 127 Duane street, New York), with which company he had been connected for several years. He was also a member of many local societies and a director of the Legal Aid Society, and took an active interest in the

work of the Citizens' Union, and during the 1900 campaign was chairman of the finance committee of the German-American McKinley and Roosevelt League. Mr. Rosen was a native of Germany, but had resided in the United States for about twenty-five years. He was married to a sister of Mr. Ernst Thalmann, head of the New York banking firm of Ladenburg, Thalmann & Co., and leaves, besides the members of his family who were with him on the ship, three sons, the eldest of which is a member of the law firm of Underwood, Van Vorst, Rosen & Hoyt; the second is a well known painter in Paris, whose pictures have



FACTORY OF THE PEQUANOC RUBBER CO.

been exhibited in the Salon, and the third is connected with Ladenburg, Thalmann & Co. Mr. Rosen was a man of literary and artistic attainments, had a large circle of acquaintances, and numbered among his friends many men prominent in society, and letters and arts.

UNITED STATES RUBBER CO.

IT is stated authoritatively that the plant of the National India Rubber Co. will not be removed from Bristol, Rhode Island. This is in answer to reports that the machinery might be transferred to Malden and Millville, Massachusetts, to other factories controlled by the United States Rubber Co.—Plans have been made to transfer the knit boot business that has been done at Woonsocket, Rhode Island, in the South street mill, to the factory of the Lawrence Felting Co., at Millville. All the knit boot and felt boot production of the United States company will thus be combined in one factory.—John Jay Watson, Jr., has been elected second assistant treasurer of the United States Rubber Co. He has been treasurer of the Joseph Banigan Rubber Co., prior to which he was connected with the Industrial Trust Co., at Providence, R. I. Mr. Watson has been also a member of the Rhode Island legislature and a member of the State board of charities and corrections.

—The late Charles L. Johnson filled the offices of secretary and treasurer of The L. Candee & Co. (New Haven, Connecticut.) His assistant in the office of treasurer, Albert C. Coe, has been elected treasurer, and H. Stewart Hotchkiss, a son of President Henry L. Hotchkiss, and a member of the class of 1900 at Yale, has been elected secretary.—The following is a record of transactions in United States Rubber on the New York Stock Exchange:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Aug. 24	1,200	20 $\frac{3}{4}$	18	800	59	57 $\frac{1}{4}$
Week ending Aug. 31	1,000	21	19 $\frac{1}{4}$	1,400	60	58 $\frac{1}{4}$
Week ending Sept. 7	900	20 $\frac{1}{2}$	18 $\frac{1}{4}$	400	58	55
Week ending Sept. 14	1,450	19 $\frac{1}{2}$	17 $\frac{1}{2}$	1,000	55 $\frac{1}{2}$	55
Week ending Sept. 21	500	18 $\frac{1}{2}$	18	100	56	56
Week ending Sept. 28	700	18	17 $\frac{1}{2}$	900	55	53
Week ending Oct. 5	10,520	17 $\frac{1}{4}$	12 $\frac{1}{2}$	3,455	53	47
Week ending Oct. 12	3,451	15 $\frac{1}{2}$	14	450	52 $\frac{1}{2}$	50
Week ending Oct. 19	1,500	15 $\frac{1}{2}$	15	85	49 $\frac{3}{4}$	48 $\frac{3}{4}$
Week ending Oct. 26	210	15 $\frac{1}{2}$	15 $\frac{1}{2}$	700	50	50

RUBBER GOODS MANUFACTURING CO.

The figures below record the transactions in Rubber Goods shares on the New York Stock Exchange since the last report published in THE INDIA RUBBER WORLD:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Aug. 24	2,600	31 $\frac{1}{4}$	28	600	79	77
Week ending Aug. 31	7,300	32	30	100	79 $\frac{1}{2}$	79 $\frac{1}{2}$
Week ending Sept. 7	6,100	31 $\frac{1}{4}$	27	200	80	80
Week ending Sept. 14	1,120	28	27	100	79	79
Week ending Sept. 21	1,000	27 $\frac{1}{2}$	25	—	—	—
Week ending Sept. 28	1,700	28 $\frac{1}{2}$	26	—	—	—
Week ending Oct. 5	5,475	26	21 $\frac{1}{2}$	300	73	70 $\frac{1}{4}$
Week ending Oct. 12	11,900	27 $\frac{1}{2}$	23	500	75 $\frac{1}{2}$	74
Week ending Oct. 19	13,835	29	27 $\frac{1}{4}$	200	75	75
Week ending Oct. 26	13,100	29 $\frac{1}{2}$	27 $\frac{1}{4}$	—	—	—

TALK ABOUT CONSOLIDATION.

AN attempt is being made to bring about a further consolidation of the mechanical rubber goods industry. The promoters are understood to have in view particularly the leading rubber factories at Akron, Ohio, none of which, except the India Rubber Co., has yet entered any combination, and also the principal manufacturers of rubber tires elsewhere who still remain independent. Part of the program is to start with the Rubber Goods Manufacturing Co. as the basis of a new corporation. One report is to the effect that the underwriting syndicate formed in New York to finance the consolidation have failed as yet to secure subscriptions for the greater amount of the money needed. This is regarded as a discouraging fact, and another is the high standard of valuation of the different properties fixed by the present owners. THE INDIA RUBBER WORLD is informed that, under the laws of Ohio, it would require the signature of every shareholder in a corporation to make valid a sale outright, but the negotiations which have been in progress at Akron have had for their object the purchase of a controlling interest in each of the companies.

Colonel George T. Perkins, president of The B. F. Goodrich Co., at Akron, said to a representative of THE INDIA RUBBER WORLD: "So far as our company is concerned, there is nothing in the reports that have been published. There have been no negotiations with our company regarding a consolidation with other rubber concerns, nor a sale to the Rubber Goods Manufacturing Co., or any one else."

President Frank A. Seiberling, of the Goodyear Tire and Rubber Co., said: "No overtures of any kind have been made

to our company, and I know nothing of the reported combination or consolidation movement."

Treasurer A. H. Noah, of the Diamond Rubber Co., said: "So far as the Diamond Rubber Co. is concerned, there are no such negotiations on, and never have been."

Officials of other Akron rubber companies declined to make any statement for publication. It may be noted that the above denials apply to companies—and not necessarily to individuals. In which connection it may be of interest to quote from the Akron *Daily Democrat* the report that B. G. Work, superintendent of The B. F. Goodrich Co., has been "slated for the general management of the consolidated interests. He may be to the rubber business what Schwab is in the United States Steel Corporation."

ANOTHER RUBBER FACTORY FOR AKRON.

RECENT newspapers reported that Akron had been visited by representatives of out-of-town interests, with a view to organizing a new mechanical rubber company and establishing a new factory in that place. The visitors to Akron were Charles Stein, S. Friedman, and J. Haber. A report from Akron to THE INDIA RUBBER WORLD says: "They are not giving out anything to the public as yet, Stein is the practical rubber man, and we understand that the others are furnishing the money. Stein has some wagon tire patents, and they will make his tires." It may be mentioned here that in September the incorporation was reported, under New Jersey laws, of the Stein Double Cushion Tire Co., with \$100,000 capital, the incorporators being K. K. McLaren, Evan J. Dudley, and H. S. Gould. The Stein tire was patented in 1892, being designed originally for bicycles. In THE INDIA RUBBER WORLD of January 1, 1901, it was described and illustrated, as adapted to vehicles of all kinds, being exploited at that time by the Stein Double Cushion Tire Co., of Meadville, Pennsylvania.

NEW ENGLAND RUBBER CLUB.

THE Club is to have a Fall dinner that bids fair to equal anything in the way of interest that has yet been planned. It is to be practically a "tropical symposium," among the speakers being, the Hon. William D. Owen, ex-secretary of state of Indiana; Wilfred A. Joubert, who has spent years in pioneering in Surinam, Professor B. T. Gallaway, chief of the bureau of plant industry, from the department of agriculture at Washington, and others. Formal notices of the dinner to members of the Club, will be sent out very soon. The date of the dinner will probably be November 21.

GUARANTEE RUBBER CO. (AKRON, OHIO.)

THE position of president and manager of this company has been taken by Charles C. Kelley, hitherto connected with the rubber factory of Morgan & Wright (Chicago), who has purchased the interest of R. T. Griffith in the Guarantee company.

TRADE NEWS NOTES.

THE directors of the Hub Gore Works (Brockton, Massachusetts) have awarded a contract for a two story brick addition to their factory in the town named, on the completion of which the factory will accommodate 150 looms. The company have factories at Rockland and Chelsea, Massachusetts, in addition to the one recently purchased at Bridgeport, Connecticut.

—The Joseph Banigan Rubber Co. (Providence, Rhode Island) were awarded a silver medal at the Pan American Exposition for the excellence of their products, and a bronze medal for the attractive appearance of their exhibit.

—James E. Odell, selling agent of the Danversport Rubber Co. (reclaimers of rubber), has removed his office in Boston to No. 186 Devonshire street.

=The Lycoming Rubber Co. (Williamsport, Pennsylvania) have excavated a large cellar under their warehouse building, to provide new storage room for crude rubber, and are preparing to erect a new office building.

=The Home Rubber Co. (Trenton) are making extensive additions to their already large plant. These additions embrace a new motor power, two additional boilers and a brick stack 125 feet high.

=The Summit City Machine Co., which has just been organized by well known Akron, Ohio, men, will give a part of its attention to the rubber trade. The rubber machinery business has attained large proportions in Akron and recently some considerable shipments have been made to Germany by the firms already in the trade.

=E. I. Aldrich, selling agent of the Hood Rubber Co. has recently been on a business tour of the western agencies, going as far as Omaha.

=The Cable Rubber Co. (Jamaica Plain, Mass.) have just installed a four roll calender of Birmingham make. They are also contemplating quite an important addition to their mill.

=J. C. Wilson, who resigned from the Hartford Rubber Works Co. to accept a position with the Seamless Rubber Co. (New Haven), secured his release from the latter company after he had been there a short time, in order to assume an important position at the New York end of the Rubber Goods Manufacturing Co. The present executive force at the Seamless Rubber Co. are George M. Allerton, treasurer of the company, whose brilliant record is well known, and E. E. Menges, formerly of A. G. Spalding & Bro.

=D. E. Martin, formerly at the head of the selling department of the Seamless Rubber Co. (New Haven), has resigned from that position and is now connected with the Hardman Rubber Co. (Belleville, N. J.)

[=Latta & Mulconroy Co., Inc., (Philadelphia) advise THE INDIA RUBBER WORLD that a fire on October 25 did some damage to their rubber store. The loss was principally confined, however, to goods in the basement—hurt by smoke and water. Their doors were not closed, and they were able to fill orders without interruption.

=Two firms of rubber goods dealers suffered losses from a fire on October 18 on Federal street, Boston—Parker, Holmes & Co., and the Hosmer-Codding Co. The total loss, caused by water rather than by fire, is estimated at \$40,000 or more, the largest share falling on Parker, Holmes & Co.

=The Trenton Rubber Manufacturing Co., whose mechanical additions in the last two years have been very large and have been noted in THE INDIA RUBBER WORLD from time to time, are adding two more boilers to their already very large steam plant.

=The Alden Rubber Co. (Barberton and Akron, Ohio) are erecting a model office building at the factory at Barberton, though offices will still be maintained in Akron.

=A gold medal was awarded to the Robins Conveying Belt Co. (New York) at the Pan American Exposition, for their exhibit of belt conveyors, in the machinery department.

=John Kearns, late of Akron, Ohio, and now superintendent of the Dunlop tire and rubber factory at Melbourne, Australia, is now in England, buying some machinery.

=William A. De Long is successfully liquidating the business of the rubber department of O. G. Mayer & Co. Mr. Mayer, by the way, is visiting Europe.

=The machinery in the Chelsea (Mass.) rubber clothing plant of the old Boston Rubber Co. has been sold to Philip McGrory, of Trenton, N. J. The rubber glove machinery owned by the same company is now in use in Canada.

=The Hazleton Boiler Co., formerly of Nos. 120-122 Liberty street, New York, has just removed its main office to the works at Rutherford, New Jersey. Rutherford is only nine miles from New York city, on the Erie railroad, with satisfactory railroad service during the day.

=Mr. Kenzo Okada, who spent some years in the United States learning the rubber business, has taken a partnership in his uncle's factory at Tokyo, Japan—the Fujikura Insulated Wire and Rubber Works—and will add to their business the manufacture of high grade mackintoshes.

=The Colonial Rubber Goods Co. have removed their Boston office from No. 81 High street to No. 166 Essex street.

=The Joseph Stokes Rubber Co. (Trenton, New Jersey) have just added to their lines of manufacture that of linen hose, having put in the latest and best machines, so that they are to-day bringing out a very superior product.

=J. Stevens Arms and Tool Co. (Chicopee Falls, Mass.) advise THE INDIA RUBBER WORLD that they have disposed of the tire making machinery used formerly by the Overman Wheel Co., the business of which concern is now in the hands of the Stevens company.

=The Pennsylvania Rubber Co. (Erie, Pa.) have been awarded a gold medal at the Pan American Exposition for their display of rubber tires and mechanical rubber goods.

PERSONAL MENTION.

THE Waterbury (Conn.) *Daily Republican* has a very interesting sketch of Mr. George M. Allerton, treasurer of the Seamless Rubber Co., the wish of the paper being to make Mr. Allerton mayor of Waterbury. While Mr. Allerton appreciates the compliment, he is unwilling to allow his name to be used, as pressure of business would keep him from serving.

=Mr. John O. DeWolff, formerly assistant superintendent of the Boston Woven Hose and Rubber Co., at present consulting engineer with W. B. Smith Whaley Co. (Boston) was married on October 17 to Miss Anna Sprague Frothingham, of Cambridge, Mass.

=Mr. Elliott M. Henderson, treasurer of the Manhattan Rubber Manufacturing Co., New York, is at present in Nicaragua.

=Mr. George A. Lewis, president of the Beacon Falls Rubber Shoe Co. (Beacon Falls, Conn.), was a delegate to the twenty-seventh annual convention of the American Bankers' Association, at Milwaukee, on October 15-17, Mr. Lewis being the president of the National Bank of Naugatuck, Connecticut.

=Mr. A. H. Yeomans, so long with the Boston Rubber Shoe Co., having become connected with the general offices of the United States Rubber Co., has established his residence in New York, on the Riverside drive.

=Mr. Frank B. Rickaby, who represents Reimers & Co. in Akron, Ohio, was married October 16, to Miss Mary C. Wilkins, the ceremony taking place at Danvers, Massachusetts. Mr. and Mrs. Rickaby will make their home in Akron.

=The New York Credit Men's Association, which has done excellent work in commercial lines, both protective and educational, sends THE INDIA RUBBER WORLD its list of officers for the coming year, and a résumé of its work during the past twelve months. The association seems stronger and more helpful to the business community than ever before. It is interesting to note that beside those in the rubber trade who are members of the association, prominent rubber men are officers, the treasurer being Edward E. Huber, of the firm Eberhard Faber, while one of the investigating and prosecuting committee is H. M. Sadler, Jr., acting general manager of the United States Rubber Co.

REVIEW OF THE CRUDE RUBBER MARKET.

OUR record of quotations shows a decline in Pará sorts as compared with one month ago, practically no change in Centrals, and a lack of uniformity in change in Africans. Prices are not given for old Pará rubbers, owing to the lack of supplies in the market, but such transactions as have been made during the month have been at well maintained prices. A feature of the statistical situation is the continued arrival at the primary markets of larger supplies of Pará sorts than in any former year so early in the season. The summary presented further on brings up the record for the crop year to the end of September. The arrivals at Pará in October, up to and including the 28th, and taking into account the rubber in transit from Manáos, reached 3345 tons (including 60 tons of Caucho), whereas the estimate made at the beginning of the month called for only 2500 tons. The total arrivals for October last year were only 2235 tons, against 2256 tons in October, 1899, and 1900 tons in October, 1898. Opinion is divided in the trade as to what may be expected during the rest of the season. During the summer a short crop was predicted for this season, particularly from the upper Amazon, on account of the limiting of credits to rubber collectors, but in spite of this there have been rather good receipts of Upriver rubber. The fact that these have been in advance of the usual dates for such receipts suggests that the reason may be that operators in the rubber fields, having short supplies of money and provisions, have hurried their rubber to market as fast as gathered, in small lots, to exchange for supplies for carrying on further work. This idea is supported by the fact that much of the new rubber has come to hand in very wet condition.

New York quotations on October 30 were:

PARÁ.		AFRICAN.	
Islands, fine, new....70	@30	Tongues.....45	@46
Islands, fine, old.....	@	Sierra Leone, 1st quality 63	@64
Upriver, fine, new....83	@84	Benguella.49	@50
Upriver, fine, old.....	@	Cameroon ball.....45	@46
Islands, coarse, new....46	@47	Flake and lumps.....32	@34
Islands, coarse, old....	@	Accra flake.....17	@18
Upriver, coarse, new...63	@64	Accra buttons.....47	@48
Upriver, coarse, old....	@	Accra strips.....	@
Caucho (Peruvian) sheet 51	@52	Lagos buttons.....46	@47
Caucho (Peruvian) ball 58	@59	Lagos strips.....	@
CENTRALS.		EAST INDIAN.	
Esmeralda, sausage...54	@55	Assam.....60	@61
Guayaquil, strip.....50	@51	Borneo.....36	@46
Nicaragua, scrap...54	@55		
Mangabeira, sheet....40	@41		

Late Pará cables quote:

	Per Kilo.		Per Kilo
Islands, fine.	48950	Upriver, fine.....	68000
Islands, coarse.....	18950	Upriver, coarse.....	48000

Manáos advices, same date:

Upriver, fine.....	58000	Upriver, coarse.....	38600
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Exchange 11½¢ d.

NEW YORK PRICES FOR SEPTEMBER (NEW RUBBER.)

	1901.	1900.	1899.
Upriver, fine.....	87@91	99½@103	101@104½
Upriver, coarse.....	65@66	70@72	77@83
Islands, fine.....	84@88	95½@99	96@99
Islands, coarse.....	48@50	55@58	61@63
Cameta, coarse.....	50@51	56@57½	62@64

tires and cushion tires,

In regard to the financial situation, Albert B. Beers, broker in India-rubber, No. 58 William street, New York, advises us:

"During October the money market in general has continued very steady, with a moderate demand for commercial paper

mostly from out of town banks, the ruling rates being 5@5½ per cent. for the best rubber names, and 6 per cent. for those not so well known."

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.		Total 1901.	Total 1900.	Total 1899.
	Fine and Medium.	Coarse.			
Stocks, August 31.....tons	485	38 =	523	566	313
Arrivals, September.....	355	145 =	500	609	652
Aggregating.....	840	183 =	1023	1175	965
Deliveries, September.....	391	146 =	537	725	628
Stocks, September 30..	449	37 =	486	450	337

	PARÁ.			ENGLAND.		
	1901.	1900.	1899.	1901.	1900.	1899.
Stocks, August 31. . . .	190	255	695	980	1200	670
Arrivals, September... 1850	1235	1350		645	310	385
Aggregating.....	2040	1490	2045	1625	1510	1055
Deliveries, September. 1790	1032	1705		600	650	625
Stocks, Sept. 30..	250	458	340	1025	860	430

	1901.	1900.	1899.
World's supply, September 30.....	2797	2664	1995
Pará receipts, July 1 to September 30.....	4112		
Pará receipts of Caucho, same dates.....	283	3188	3645
Afloat from Pará to United States, Sept. 30.	408	270	263
Afloat from Pará to Europe, September 30...	628	240	605

Balata.

SHIPPED from Caracas, Venezuela, September 24, by the steamer *Bolívar*, to Havre, 40,151 kilos; to Hamburg, 8966; to Southampton, 28,475; total, 77,592 kilos.

Liverpool.

WILLIAM WRIGHT & Co. report [October 1]: "Fine Pará.—The market has been dull, and prices have gradually declined, but at the close there is a firmer tone, and some signs of a slight reaction. Supplies continue to come forward freely, and it is now stated that the shortage in the crop will not become apparent until early next year, the strong buying both in Pará and Manáos at prices considerably over the parity of

SITUATION WANTED.

CHEMIST.—Wanted for the laboratory and sales department of a supply house, an energetic worker familiar with the chemistry and the compounding of the material used in rubber works. Applicant should give a full account of himself. Address WORKER, care of THE INDIA RUBBER WORLD. [57]

FOR SALE.

THREE bias cutting machines, especially built and suitable for cutting velveteens and other fabrics on the bias. Each machine cuts a 4 yard length at a stroke; has self-sharpening knives and adjustable automatic feed; is perfectly balanced, requiring but little power to operate. All are in perfect condition; equipped with fast and loose driving pulleys, feed tables, etc. Can be operated at the rate of from 45 to 50 cuts per minute. Address E. H. B., Box 165, New York. [103]

FOR SALE.—One 22×60 Stock and Friction Calender, good as new; used only short time.

One nearly new 250 horse power Harris-Corliss engine.

Large Fire Pump, nearly new, and steam and water pipes; little used.

One 2½×10 Devulcanizer Track and Carriage, and one 2½×15 Track and Carriage.

One 12×36 Double Geared Grinder.

One 8×12 Washer.

One large Sturtevant Blower, No. 8. Also, several smaller Blowers.

Lot of Pulleys and Shafting, used only a short time.

PHILIP MCGRORY, Trenton, N. Y.

those ruling here, lends color to this belief. Meanwhile the market is kept quiet here by offering small quantities at cheap rates, the bulk of present stock being quite off the market. Sales on spot only total 115 tons, and 125 for forward delivery, closing prices being 3s. 8d. for Upriver, and 3s. 7d. for Islands."

Marius & Levy [reporting October 15] continue to predict a shortage in the rubber production of the current year, despite the larger receipts at Pará, up to date, than usual. They write: "We beg to say that, in our opinion, this increase in the receipts will not last, and if it has taken place so far, it is simply owing to the fact that a number of firms in Brazil were rushing to get their stuff down as quickly as possible, in order to make remittances to their European creditors." The same firm predict also a shortage in Congo rubbers this year: "It is expected that the Congo crop will be reduced by approximately 20 per cent.; all the colonial concerns on the Congo being partially at a standstill, through the tremendous decline in their capital and shares, and, as there does not appear to be much chance of their raising fresh capital, the consequence is a fall in the receipts."

London.

JACKSON & TILL, under date of October 1, report stocks:

	1901.	1900.	1899.
LONDON { Pará sorts..... tons	—	—	—
Borneo.....	134	219	126
Assam and Rangoon.....	87	33	26
Other sorts.....	481	617	396
Total.....	702	869	548
LIVERPOOL { Pará.....	1024	866	428
Other sorts.....	1076	1111	855
Total, United Kingdom.....	2802	2846	1831
Total, September 1....	2736	3170	1988
Total, August 1.....	2944	3645	1878
Total, July 1.....	3128	3653	2247
Total, June 1....	3502	3624	2510
Total, May 1.....	3397	3952	2129

PRICES PAID DURING SEPTEMBER.

	1901.	1900.	1899.
Pará fine.	3/7 @ 3/9½	4/1 @ 4/4½	4/2 @ 4/3½
Negroheads, Islands.....	2/0½	2/4	2/6½
Do scrappy.....	2/8 @ 2/9	2/11 @ 3/0½	3/2½ @ 3/5
Bolivian.....	3/9	4/2½ @ 4/4	4/3½ @ 4/4

Declining Rubber Output of Angola.

RECENT reports in these pages from Lisbon have pointed to a decline in the rubber output of Portuguese West Africa. Herewith is a statement showing exports from the various ports during 1900:

Benguella.....	pounds 2,606,602
Loanda.....	1,643,648
Mossamedes.....	90,402
Ambriz.....	50,226

Total.....pounds 4,390,878

This is a decline of about 40 per cent. as compared with the previous year, when the output was the largest on record. We now have figures indicating the total output for this territory for the following years, in addition to the above—in pounds:

	1898.	1899.	1900.	1901.	1902.	1903.
2,967,081	4,083,064	4,652,698	5,025,991	7,431,305	7,436,026	

The value is given at 3,605,735 Portuguese milreis in 1900 against 5,716,567 in 1899, the milreis being worth \$1.08 gold.

Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: At the sales on September 24 about 475 tons, mostly Congo sorts, were exposed, of which about 307 tons found buyers at unchanged prices. The brokers' valuations, based on the preceding sale were reached in most cases, the fine qualities commanding sometimes a slight premium.

On October 7 a large transaction was concluded for the

United States. The whole stock of Upper Congo—Lopori on the spot, amounting to 303 tons, together with 29 tons shortly expected per steamer *Anversville*, was sold on private terms. This quantity included 69 tons Lopori I and 165 tons Lopori II, besides 98 tons Lopori I and II. The firsts are understood to have been valued at 7.85 francs per kilogram and the seconds at 6.25@6.50.

At the sales on October 31 will be offered, among other lots—

61 tons Upper Congo—Equateur.....	valuation f7.50
41 " Upper Congo—Aruwimi.....	5.50
62 " Upper Congo—small strips.....	6.25
43 " Upper Congo—Yengu.....	7.90
42 " Uellé.....	5.35

G. SCHMID & CO.

Antwerp, October 9, 1901.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Since the inscription sale of September 24, and especially since the beginning of October, large sales have taken place—including about 332 tons Lopori on spot and Lopori to arrive—on private terms. The stock of rubber which, at the end of September amounted to 896 tons, is now reduced to about 550 tons. The next inscription sale will be held on October 31.

E. KARCHER & CO.

Antwerp, October 8, 1901.

ANTWERP RUBBER STATISTICS FOR SEPTEMBER.

DETAILS.	1901.	1900.	1899.	1898.	1897.
Stock, Aug. 31. Kilos	684,355	1,056,124	400,432	144,526	157,278
Arrivals September.	887,256	417,050	232,517	192,531	251,315
Congo sorts.....	871,360	330,238	230,123	147,871	238,789
Other sorts.....	15,896	57,812	2,394	44,660	12,526
Aggregating....	1,571,611	1,473,174	632,949	337,057	408,593
Sales September....	675,468	468,412	325,407	110,183	151,244
Stocks, Sept. 30....	896,143	1,004,762	307,482	226,874	257,349
Arrivals since Jan. 1	4,726,126	4,584,468	2,628,387	1,415,479	1,315,785
Congo sorts.....	4,382,856	3,866,145	2,324,769	1,205,671	1,218,347
Other sorts.....	343,270	718,323	303,618	209,808	97,438
Sales since Jan. 1..	4,443,932	3,871,697	2,584,245	1,283,068	1,198,064

ARRIVALS AT ANTWERP.

SEPTEMBER 21.—By the *Stanleyville*, from the Congo:

Ch. Dethier (Société Belgika)	kilos. 4,000
M. S. Cols. (Société Lubefu).....	7,000
Bunge & Co. (Domaine privé Etat du Congo).....	21,000
Bunge & Co. (Plantations Lacourt).....	6,900
Bunge & Co. (Comité Spécial Katanga).....	8,300
Société A B I R.....	60,300
Société Coloniale Anversoise (Belge du Haut Congo)	16,600
Société Coloniale Anversoise (Société Lomami).....	13,000
	146,100

OCTOBER 11.—By the *Anversville*, from the Congo:

Ch. Dethier (Société Belgika)	kilos 3,400
Ch. Dethier (Société la Loanjé).....	2,000
M. S. Cols (Société Lubefu)	7,000
Société Coloniale Anversoise (Belge du Haut Congo).	3,000
Société Coloniale Anversoise (Sud Kamerun)	800
Société Coloniale Anversoise (Société La Djuma)....	4,500
Société Coloniale Anversoise (Lomami).....	5,000
Bunge & Co. (Domaine privé Etat du Congo).....	91,000
Bunge & Co. (Société Anversoise).....	18,000
Bunge & Co. (Société Isanghi).....	7,700
Bunge & Co. (Plantations Lacourt).....	12,700
L. & W. Van de Velde (Comptoirs Congolais Velde).	1,000
Société ABIR.....	29,700
Comptoir Commercial Congolais.....	29,800
Evrard Havenith (Andréa).....	1,000
	216,700

A RECENT circular from G. van den Kerckhove (Antwerp) contains a reference to the movement to consolidate the traffic of the Kassai region, in the Congo basin, under the name "Le Syndicate au Kassai." From a commercial point of view, and also with regard to the improvement in the quality of rubber,

the Antwerp circular regards the idea with favor. The Kassai being one of the richest regions in the Congo Free State, great results should follow its exploitation under more competent direction than in the past, and this might better be done under a single control, with a consolidation of resources. First of all should be expected a change in the methods of handling rubber. For too long a time have three fourths of the lots offered in Antwerp been spoiled, through the lack of proper treatment in the original preparation of the rubber. It has been stated that the quality of Congo rubber has suffered from its prolonged storage in the territory of production, but occasional lots of very old rubber reach Antwerp from Sierra Leone, Gambia, Portuguese Congo, and East Africa in a state of perfect preservation. There are better methods of preparing rubber than have been used in the Kassai country, and they are going to be adopted. It is natural that any enforced production of a commodity by native labor should entail inferiority of quality, but the over-heating of the rubber can be avoided in large measures. Deterioration mostly begins after the merchandise has been packed and stored in the warehouses.

Bordeaux.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Since our last report the demand for Caoutchouc in this market has been more active, and the following prices have been obtained, in francs per kilogram:

Soudan twists, fine...	6.70@6.95	Cassamance, C.....	3.
Do ordinary...	6.10@6.45	Grand Bassam, lump..	5.
Soudan niggers, fine...	6.20@6.25	Do niggers	5.70
Do ordinary...	4.50@5.	Grand Lahou	5.00@5.25
Cassamance, A. P.....	6.80	Madagascar niggers...	4.50@5.
Do A.....	5.40	Do Tamatave...	5.50@5.75
Do A. M.....	4.60	Do Majunga...	4.50@5.
Do B.....	3.60	New Caledonia	8.15

Arrivals since last report:

Sept. 25.—By the <i>Ville de Maranhão</i> :	Kilos.
Cassamance.....	2,500
Sept. 26.—By the <i>Child</i> :	
Soudan twists.....	10,300
Oct. 8.—By the <i>Tameris</i> :	
Soudan twists and niggers.....	12,200
Oct. 12.—By the <i>Brasil</i> :	
Soudan twists.....	8,500
Total.....	33,500

P. CHAUMEL.

Bordeaux, October 14, 1901.

Hamburg.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The Hamburg market during the last week opened very unsteady along the whole line, and was exceptionally dull. This want of activity held the transaction within such moderate bounds, that there is scarcely anything new to report. Pará sorts, at the beginning, were somewhat firm, caused no doubt by the shortage in some quarters, but the interest in them soon became listless, and they receded from the improved condition gained.

PARA RUBBER VIA EUROPE.

Oct. 3.—By the <i>Majestic</i> =Liverpool:	FOUNDS.
A. T. Morse & Co. (Cauché).....	37,000
Reimers & Co. (Cauché).....	22,500 59,500
Oct. 7.—By the <i>Umbria</i> =Liverpool:	
Reimers & Co. (Cauché).....	34,500
A. T. Morse & Co. (Cauché).....	22,500 57,000
Oct. 9.—By the <i>Oceanic</i> =Liverpool:	
Reimers & Co. (Cauché).....	45,000
A. T. Morse & Co. (Coarse).....	10,000 55,000
Oct. 12.—By the <i>Lucania</i> =Liverpool:	
Robinson & Tallman (Coarse).....	13,500

Oct. 17.—By the <i>Teutonic</i> =Liverpool:	
Reimers & Co. (Coarse).....	4,500
Crude Rubber Co. (Cauché).....	2,000 6,500
Oct. 21.—By the <i>Etruria</i> =Liverpool:	
Reimers & Co. (Coarse).....	8,000
A. T. Morse & Co. (Coarse).....	7,000 15,000

OTHER ARRIVALS AT NEW YORK

SEPT. 23.—By the <i>Alleghany</i> =Greytown:	FOUNDS.
A. P. Strout.....	6,500

Of the middle sorts, which were in part very quiet, the Africans—Fine Mozambique balls and spindles, Massai, Batanga balls and thimbles—deserve mention; they were in good demand, and prices were well maintained. All other sorts, as a rule, were more or less neglected. Transactions were concluded at the following figures, in marks per kilogram:

Pará fine, hard cure, spot.....	8.15@8.20
Mollendo fine, spot.....	7.75@7.85
Mollendo fine, delivery.....	7.80@7.90
Santos sheets, fine.....	4.25@4.40
Mangabeira, Bahia.....	3.50@3.75
Mangabeira, Pernambuco.....	3.40@3.60
Mozambique balls, red, finest.....	7.80@7.85
Mozambique balls, red, fine.....	7.40@7.60
Mozambique balls, good.....	7.00@7.20
Mozambique balls, red and white.....	6.50@6.60
Mozambique balls, black and white.....	6.25@6.40
Massai niggers.....	5.75@5.80
Massai niggers, mixed.....	5.20@5.25
Batanga balls.....	4.15@4.20
Lomé niggers.....	3.50@3.55

Hamburg, October 15, 1901.

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

October 1.—By the steamer *Grangense*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Cauché.	Total
New York Commercial Co.	120,900	61,000	99,700	1,100=	282,700
Crude Rubber Co.....	85,700	22,100	29,900	....=	137,700
A. T. Morse & Co.....	21,700	3,100	80,700	....=	105,500
Joseph Banigan Rubber Co	16,800	3,400	2,200	9,900=	32,300
Reimers & Co.....	....	....	23,200	....=	23,200
Herbst Brothers	300	1,100	200	300=	1,900
Total.....	245,400	90,700	235,900	11,300=	583,300

October 10.—By the steamer *Amazonense*, from Pará:

New York Commercial Co.	54,600	17,000	69,700	....=	141,300
A. T. Morse & Co.....	3,700	....	43,700	....=	47,400
Boston Rubber Shoe Co..	....	....	22,700	....=	22,700
Crude Rubber Co.....	30,600	4,000	5,100	....=	39,700
Reimers & Co.....	....	....	17,600	....=	17,600
Total.....	88,900	21,000	158,800	....=	268,700

October 16.—By the steamer *Hubert*, from Manáos and Pará:

New York Commercial Co.	122,200	62,300	83,800	8,900=	277,200
Crude Rubber Co	101,400	19,000	15,500	900=	136,800
A. T. Morse & Co.....	42,600	4,900	35,600	2,500=	85,600
Reimers & Co.....	35,000	13,200	20,500	.. =	68,700
Lawrence Johnson & Co..	6,400	700	600	....=	7,700
G. Amsinck & Co.....	6,400	300	700	....=	7,400
L. Hagenaers & Co.....	2,500	....	400	....=	2,900
Total.....	316,500	100,400	157,100	12,300	586,300

October 22.—By the steamer *Hilary*, from Pará:

New York Commercial Co.	174,300	40,400	73,000	900=	288,600
A. T. Morse & Co.....	40,700	7,400	126,600	....=	174,700
Crude Rubber Co.....	35,900	8,600	6,600	....=	51,100
Boston Rubber Shoe Co..	....	....	22,700	....=	22,700
Reimers & Co.....	8,600	1,100	3,600	....=	13,300
Total... ..	259,500	57,500	232,500	900=	550,400

[NOTE.—The steamer *Fluminense*, from Pará, with 335 tons of rubber aboard, was due at New York on October 30.]

Andreas & Co	4,000
Maltus & Ware.....	2,500
D. A. De Lima & Co.....	4,000
Kunhardt & Co.....	5,000
G. Amsinck & Co.....	2,500
Lawrence Johnson & Co.....	1,500
S. Samper & Co.....	500
Jimenez & Escobar.....	300
For London.....	1,500 28,300

SEPT. 24.—By the *Advance*=Colon:

W. Loaliza & Co.....	4,000
W. L. Rathbun & Co.....	400
G. Amsinck & Co.....	500
Lawrence Johnson & Co.....	500
Smithers, Nordenholdt & Co.....	500 5,000

CENTRALS—Continued.

SEPT. 24.—By <i>El Norte</i> =New Orleans:		
Eggers & Heinlein	7,000	
For London	4,000	11,000
SEPT. 29.—By the <i>Germanie</i> =Liverpool:		
Reimers & Co.	10,000	
SEPT. 28.—By the <i>Heclius</i> =Bahia:		
J. H. Rossbach & Bro.	21,500	
SEPT. 28.—By the <i>Prins Willem V.</i> =Trinidad:		
Thebaud Bros., (Angostura Fine)	6,800	
Thebaud Bros., (Angostura Coarse)	3,200	10,000
SEPT. 28.—By the <i>Esperanza</i> =Mexico:		
H. Marquardt & Co.	1,000	
Thebaud Brothers	200	
E. N. Tibbais	300	
For Europe	3,000	4,500
SEPT. 30.—By the <i>Proteus</i> =New Orleans:		
A. T. Morse & Co.	2,500	
OCT. 1.—By the <i>Altai</i> =Savannah:		
Kunhardt & Co.	5,000	
Jimenez & Escobar	1,200	
G. Amsinck & Co.	1,500	
Lawrence Johnson & Co.	1,000	
D. A. De Lima & Co.	1,000	
Sussdorf, Zaldo & Co.	200	9,900
OCT. 1.—By <i>El Rio</i> =New Orleans:		
George J. Worth	1,500	
Eggers & Heinlein	7,500	9,000
OCT. 4.—By the <i>Monterey</i> =Mexico:		
H. Marquardt & Co.	2,000	
Fred. Probst & Co.	200	
E. N. Tibbais	300	2,500
OCT. 1.—By the <i>Alliance</i> =Colon:		
G. Amsinck & Co.	10,000	
Hirzel, Feltman & Co.	9,000	
Roldan & Van Sickle	5,000	
Flint, Eddy & Co.	2,800	
Gillespie Bros. & Co.	3,000	
Joseph Hecht & Co.	2,400	
L. N. Chemedlin	1,700	
T. N. Morgan	1,000	
Crude Rubber Co.	1,400	
L. N. Carrington	950	
Lawrence Johnson & Co.	600	38,400
OCT. 3.—By Pennsylvania RR.—New Orleans:		
G. Amsinck & Co.	4,500	
D. A. De Lima & Co.	1,200	
Jimenez & Escobar	1,000	
L. N. Chemedlin	700	
Silva, Bussenius & Co.	600	8,300
OCT. 8.—By the <i>Adirondack</i> =Greystown:		
A. P. Strout	7,500	
Andreas & Co.	1,000	
G. Amsinck & Co.	2,500	
A. D. Straus & Co.	2,000	
Kunhardt & Co.	1,000	
L. Johnson & Co.	800	
Roldan & Van Sickle	500	
Jimenez & Escobar	200	16,200
OCT. 8.—By the <i>Seneca</i> =Mexico:		
Flint, Eddy & Co.	700	
J. W. Wilson & Co.	500	
H. Marquardt & Co.	500	
L. N. Chemedlin	300	
E. Steiger & Co.	200	2,000
OCT. 9.—By the <i>Coleridge</i> =Bahia:		
J. H. Rossbach & Bro.	12,000	
OCT. 8.—By the <i>Finance</i> =Colon:		
A. Santos & Co.	8,700	
G. Amsinck & Co.	5,000	
Crude Rubber Co.	3,100	
Hirzel, Feltman & Co.	2,900	
Frame, Alston & Co.	1,800	
Eggers & Heinlein	500	
For Europe	1,500	23,500
OCT. 12.—By the <i>Havana</i> =Mexico:		
H. Marquardt & Co.	700	
E. Steiger & Co.	500	
For London	1,500	2,700
OCT. 14.—By the <i>Louisiana</i> =New Orleans:		
A. T. Morse & Co.	4,000	
A. N. Rotholz	1,500	5,500
OCT. 15.—By the <i>Alene</i> =Savannah:		
Jimenez & Escobar	3,500	
G. Amsinck & Co.	4,000	
Lawrence Johnson & Co.	500	8,000
OCT. 15.—By the <i>Orizaba</i> =Colon:		
Isaac Brandon & Bros.	3,000	
Dumarest & Co.	2,200	
Suzarte & Whitney	1,500	
Eggers & Heinlein	1,500	
Frame, Alston & Co.	1,300	
Roldan & Van Sickle	1,300	
Flint, Eddy & Co.	1,100	
Hirzel, Feltman & Co.	1,100	
G. Amsinck & Co.	1,000	
D. N. Carrington	600	15,100

CENTRALS—Continued.

OCT. 15.—By <i>El Norte</i> =New Orleans:		
A. T. Morse & Co.	5,000	
A. N. Rotholz	2,500	7,500
OCT. 16.—By Pennsylvania RR.—New Orleans:		
G. Amsinck & Co.	5,000	
Kunhardt & Co.	600	
L. Johnson & Co.	400	6,000
OCT. 17.—By the <i>Maskelyne</i> =Bahia:		
J. H. Rossbach & Bros.	9,600	
Booth & Co.	2,000	11,000
OCT. 21.—By <i>El Cid</i> =New Orleans:		
A. T. Morse & Co.	12,000	
Eggers & Heinlein	4,500	16,500
OCT. 21.—By the <i>Alleghany</i> =Greystown:		
A. P. Strout	5,000	
A. D. Straus & Co.	2,500	
Andreas & Co.	1,500	
S. Samper & Co.	4,000	
Jimenez & Escobar	3,500	
G. Amsinck & Co.	1,300	
D. A. De Lima & Co.	1,000	
Kunhardt & Co.	500	19,300
OCT. 22.—By the <i>Adriatic</i> =Colon:		
G. Amsinck & Co.	2,900	
Smithers, Nordenholdt & Co.	1,100	
H. Marquardt & Co.	700	
Joseph Hecht & Co.	300	4,900
SEPT. 24.—By the <i>Friesland</i> =Antwerp:		
Crude Rubber Co.	117,500	
George A. Alden & Co.	28,000	
Reimers & Co.	12,000	
Livesey & Co.	13,000	170,500
SEPT. 27.—By the <i>Germanie</i> =Liverpool:		
George A. Alden & Co.	7,000	
Crude Rubber Co.	6,000	
Livesey & Co.	3,500	16,500
SEPT. 28.—By the <i>Compania</i> =Liverpool:		
Livesey & Co.	7,000	
OCT. 3.—By the <i>Majestic</i> =Liverpool:		
Reimers & Co.	13,000	
OCT. 5.—By the <i>Patriota</i> =Hamburg:		
Reimers & Co.	10,500	
Livesey & Co.	11,500	
George A. Alden & Co.	6,500	28,500
OCT. 7.—By the <i>Umbria</i> =Liverpool:		
Reimers & Co.	5,500	
Livesey & Co.	4,500	10,000
OCT. 7.—By the <i>Vaderland</i> =Antwerp:		
A. T. Morse & Co.	78,000	
George A. Alden & Co.	55,000	
Crude Rubber Co.	11,500	
Reimers & Co.	6,500	151,000
OCT. 9.—By the <i>Oceanic</i> =Liverpool:		
George A. Alden & Co.	11,000	
Crude Rubber Co.	10,000	
Reimers & Co.	5,500	26,500
OCT. 11.—By the <i>Graf Waldersee</i> =Hamburg:		
Livesey & Co.	17,500	
OCT. 11.—By the <i>St. Cuthbert</i> =Antwerp:		
Joseph Cantor	20,000	
OCT. 12.—By the <i>Lucania</i> =Liverpool:		
Robinson & Tallman	55,000	
George A. Alden & Co.	16,000	
Livesey & Co.	12,000	83,000
OCT. 14.—By the <i>Bohemian</i> =Liverpool:		
Crude Rubber Co.	23,000	
George A. Alden & Co.	22,500	45,500
OCT. 16.—By the <i>Kensington</i> =Antwerp:		
George A. Alden & Co.	53,000	
Reimers & Co.	3,500	
Crude Rubber Co.	52,500	109,000
OCT. 17.—By the <i>Teutonic</i> =Liverpool:		
Reimers & Co.	8,000	
Crude Rubber Co.	6,000	
George A. Alden & Co.	6,000	
Carter, Bell & Co.	2,000	22,000
OCT. 21.—By the <i>Etruria</i> =Liverpool:		
Livesey & Co.	15,000	
OCT. 21.—By the <i>British King</i> =Antwerp:		
Joseph Cantor	15,500	
OCT. 21.—By the <i>Palatia</i> =Antwerp:		
Reimers & Co.	15,000	
OCT. 22.—By the <i>Zeeland</i> =Antwerp:		
Livesey & Co.	15,000	
Reimers & Co.	4,500	19,500
OCT. 23.—By the <i>Cervie</i> =Liverpool:		
Reimers & Co.	35,000	

EAST INDIAN.

	POUNDS.
OCT. 11.—By the <i>Amara</i> =Calcutta:	
Reimers & Co.	4,500
OCT. 14.—By the <i>St. Louis</i> =Southampton:	
A. T. Morse & Co.	500
OCT. 18.—By the <i>Hudson</i> =Singapore:	
Robert Brans & Co.	9,000
OCT. 21.—By the <i>Etruria</i> =Liverpool:	
Reimers & Co.	10,000
OCT. 22.—By the <i>Arara</i> =Singapore:	
Reimers & Co.	1,000
PONTIANAK.	
OCT. 18.—By the <i>Hudson</i> =Singapore:	
Robert Brans & Co.	210,000
OCT. 22.—By the <i>Arara</i> =Singapore:	
Reimers & Co.	500,000
George A. Alden & Co.	200,000 700,000

GUTTA-PERCHA AND BALATA.

	POUNDS.
SEPT. 24.—By the <i>Mantou</i> =London:	
Spaulding Manufacturing Co.	7,000
OCT. 1.—By the <i>Sardinian</i> =Glasgow:	
Reimers & Co.	2,500
OCT. 18.—By the <i>Hudson</i> =Singapore:	
Reimers & Co.	1,500
OCT. 21.—By the <i>Palatia</i> =Hamburg:	
Reimers & Co.	11,500
OCT. 22.—By the <i>Menamies</i> =London:	
Spaulding Manufacturing Co.	6,500
BALATA.	
SEPT. 28.—By the <i>Prins Willem V.</i> =Trinidad:	
George A. Alden & Co.	500
OCT. 1.—By the <i>Sardinian</i> =Glasgow:	
Earle Brothers	3,500
OCT. 10.—By the <i>Amazonense</i> =Barbados:	
Middleton & Co.	11,000

CUSTOM HOUSE FIGURES.

PORT OF NEW YORK—SEPTEMBER.

Imports:	POUNDS.	VALUE.
India-rubber	3,140,501	\$1,530,826
Gutta-percha	23,808	15,163
Gutta-jelutong (Pontianak)	1,296,480	48,359
Total	4,460,789	\$1,594,348
Exports:		
India-rubber	66,588	\$35,287
Reclaimed rubber	92,715	13,728
Rubber Scrap Imported	949,757	\$ 64,192

BOSTON ARRIVALS.

	POUNDS.
SEPT. 4.—By the <i>Sachem</i> =Liverpool:	
Reimers & Co.—African	50,115
SEPT. 5.—By the <i>Storm King</i> =Antwerp:	
Robinson & Tallman—African	1,843
SEPT. 9.—By the <i>Devonian</i> =Liverpool:	
Robinson & Tallman—Caucho	11,869
SEPT. 15.—By the <i>Michigan</i> =Liverpool:	
Reimers & Co.—Caucho	22,500
Reimers & Co.—African	12,600 35,100
SEPT. 16.—By the <i>Kensington</i> =Antwerp:	
Crude Rubber Co.—African	4,103
George A. Alden & Co.—African	29,130 33,233
[Included in New York arrivals by the <i>Kensington</i> , September 20.]	
SEPT. 29.—By the <i>Sagamore</i> =Liverpool:	
Reimers & Co.—African	21,872
Crude Rubber Co.—Caucho	1,274 23,146
SEPT. 30.—By the <i>Friesland</i> =Antwerp:	
Livesey & Co.—African	13,382
[Included in New York arrivals by the <i>Friesland</i> , September 24.]	
Total	108,921
[Value, \$34,089.]	

